Creating the Contexts of Change

A Study of the Management of Technological Change in the New Zealand Export Meat Industry

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To all the men and women of the New Zealand meat export industry who so generously opened their hearts and minds to me.

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CHAPTER 1

INTRODUCTION

1.1 *Overview*

This is a study of the management of technological change in the meat industry in New Zealand. The purpose of the study is to examine the way in which change is managed effectively. Major perspectives in organisation theory - contingency theory, population ecology, institutional theory, resource dependence - mainly explain why or how organisations adapt or fail to adapt to their environments. They do not specify the mechanisms or processes of adaptation. Organisational change models - Organisation Development (OD), Total Quality Management (TQM), work place reform etc - mainly deal with internal processes but generally do not specify the conditions under which change is most likely to succeed.

In this introduction I will start with an outline of the current understanding of change management - how research in this area is now regarded by leading writers as being inadequate both to explain what actually happens and as a guide to practitioners. Secondly I will outline the importance of the meat industry to New Zealand's economy and the transformations it has undergone in the last fifteen years. This will be followed with an account of the research design and plan. Lastly I will give an overview and outline of the thesis.

1.2 *Current Understanding of Change Management*

This thesis examines the management of the process of change in the meat freezing industry in New Zealand. The focus is on the introduction of new technology onto the sheep killing chains in four plants.

As the environments in which organisations operate have become increasingly complex and turbulent over the last twenty five years and organisations have struggled

to adapt and change to meet new challenges, change management has been the subject of an increasing amount of interest from academics and practitioners . However, despite the amount of research and the numbers of consultants employed to effect change, the area has remained confusing, elusive and problematic. Increasingly, scholars are pointing to the lack of research on the *process* of change as a major reason for the inadequacies of change research and practise (Srivastva et al, 1992; Friedlander & Brown, 1974; Pettigrew, 1982, 1985; Johnson, 1987). These scholars maintain that much of the literature on change management has characterised change as a finite, discrete event in the otherwise stable life of an organisation. They are studies of *change* rather than *changing*. Few studies take contextual factors, such as history and culture into consideration (Pettigrew, 1985; Faucheaux et al, 1982). This view of the change process as sequential and episodic rather than as an ongoing and dynamic process has driven the search for normative prescriptions and formulae for success (Beckhard & Harris, 1987).

Leading academics and researchers are starting to point to the many failures due to the inadequacies of these normative models, seeking to develop more sophisticated models (Kanter et al, 1992; Duck, 1993; Dunphy & Stace, 1989; Goodman et al, 1982). They point to the complexity and volatility of the change process. Kanter et al (1992, p 370) feel that change management is so complex and difficult that "the fact that it occurs successfully at all is something of a miracle." Change initiatives have often failed to achieve the success expected because they do not proceed in a planned, step by step manner which managers are led to expect by many writers. Writers are now beginning to model the process of change management as a balancing act between key players at all levels of the organisation (Kanter et al, 1992; Duck, 1993). The emerging reality of the change process as portrayed by these writers is messy, confusing and sometimes chaotic. Duck refers to the need to manage the feelings and emotions of employees and the importance of values in the change process. Kanter et al (1992, p 496) point out that "the factors differentiating

what works from what does not are elusive. There is an apparent unrelatedness between the best practise and desirable results."

An important aspect of change management which few writers make reference to is the context in which change is embedded. Kanter et al (1992, p 497) point to the importance of the "pre-history of change". Kanter (1983, p 283) refers to this as the "foundations of change" where she makes the important point that if the pre-history or foundations of change are negative then it becomes very difficult to bring about a successful change implementation. On the other hand if the foundational context is positive - if there is a pre-history of positive relationships, trust and so on, then the likelihood of a successful change is much greater. In particular, it has been recognised that trust is an important determinant of social behaviour (Eg Rotter et al, 1972, p 40; Golembiewski & McConkie, 1975; Hirsch, 1978: p78). The trust factor has a critical effect on shaping the prior conditions for successful change. The significance of the prior context is virtually ignored by most writers and consultants who implicitly assume that change begins when the first step of the change prescription is undertaken. The conclusion of this research is that it is this contextual factor which is the most significant factor of all in influencing the success of the change process and which has a significant influence on the "foundations of change"..

So far we have considered change management in general. There is further evidence of the inadequacy of theory and practice at the level of technological change, the particular focus of this thesis. A major environmental factor stimulating change has been the rapid growth of new technologies. Change initiatives relating to new technologies have been particularly problematic. For example in the UK, a recent survey concluded that out of £1.9 billion spent on technology-related change by manufacturers in Britain each year, approximately one third is wasted (Kearney, 1989). Other studies suggest variously that the failure rate for new technology related change in the UK is between 40% and 70% (McKracken, 1986; New, 1989, Smith & Tranfield, 1987).

The implementation of Total Quality Management (TQM) is becoming increasingly widespread in New Zealand and is a significant force driving change and reforms in the work place. TQM involves major, organisation-wide change in structure, systems, technologies and attitudes (Dale and Cooper, 1992) and there is evidence that this is proving problematic for many organisations. A survey in 1979 (Crosby, 1979) carried out by an early adherent of the TQM movement found that over 90% of TQM initiatives either fail completely or fail to achieve significant gains. There is also evidence among New Zealand companies of similar poor returns on TQM investment (Addison, 1995). There is wide agreement among commentators that the reason for this failure with many TQM initiatives is not that there is something inherently wrong with TQM practices and systems but that the fault lies with managements' and consultants' woeful lack of knowledge as to how to manage change (Blackler & Brown, 1986; Burnes, 1989; Clegg & Symon, 1991; Crosby, 1979; Dale & Cooper, 1992; Deming, 1982; Juran, 1988; Kearney, 1989).

1.3 *The New Zealand Meat Industry*

The meat industry was chosen as the location of the study for several reasons. Firstly the export meat industry has been of great importance to New Zealand's economy for at least the last century.

Secondly the meat industry continues to invest millions of dollars in new technology on the slaughtering chain in an effort to lower unit costs and meet overseas customers' stringent hygiene and quality standards.

Lastly, the meat industry lends itself well to inter-plant comparisons because, generally speaking, the processing technologies and strategies are the same throughout the industry. The meat industry as a whole perceives the same problems and meets them in the same way. This constancy of independent macro variables allows us to examine which micro factors contribute to more or less successful implementations.

New Zealand's economic development over the last century has been largely dependent on agricultural exports which constituted 53% of total merchandise exports in 1991.

One third of this total is derived from sheep products - meat, wool, skins and by-products. In dollar terms this was worth approximately $2.5 billion. The industry was one of New Zealand's largest employers with 35,000 employees at peak (Le Heron et al, 1993). Government policies which began to be implemented in the late 1960s of input subsidies for fertiliser, land development expenditure, transport and plant investment in the sheepmeat industry had seen the numbers of sheep and lambs produced increase dramatically and the numbers of meat export plants proliferate (Davison, 1990). In the 50 years to 1968 only three new export plants were opened while five were opened between 1969 and 1979 (Le Heron et al, 1993).

The meat industry developed rapidly in the favourable conditions of guaranteed markets and protected and subsidised inputs and processing. The industry became a numbers game as farmers and processors tried to maximise their profit under the prevailing conditions. Land development grants encouraged farmers to open up new land to produce as many sheep as they could. Very little thought was given to productivity, efficiency or marketing.

As throughput nearly doubled and companies added extra capacity to cope with the growing peak stock levels, international meat prices collapsed. This had no immediate impact on the industry because prices and costs were propped up by the government and in 1989 overcapacity in the meat industry was estimated at 40 - 45%. Warning rumbles started to be heard about restructuring and the need to change from a commodity production mode to a value added and branded product (Savage et al, 1989; Britton et al, 1992 p.109).

During the 1970s and into the 1980s, companies were investing in productive capacity to cope with the increasing peak demands. They were also investing huge amounts in upgrading existing plant to comply with EEC and US hygiene regulations.

In the ten years to 1981, NZ meat companies invested $380m (NZFCA,1982) and in the years between 1982 and 1988 a further $400m was spent (Blomfield, 1988). These new hygiene regulations did not required only massive capital investment. The more stringent specifications for levels of contamination and cross contamination between carcases meant that many more people were needed on the killing chain to keep up the throughput volume. In a matter of five years the numbers of butchers working on export chains increased from an average of approximately 30 to 50, an increase of 66%.

This had a large impact on the unit costs of processing sheepmeat. At the same time, transport costs began to rise, and there was a collapse in the price of export sheepmeat. However probably the greatest impact on producers and processors were new government policies which saw the winding back of subsidies of all kinds. Government assistance rose from $9 million in 1970 to $654 million in 1981. By 1986 assistance had fallen to $45 million (Tyler & Lattimore, 1990). These factors taken together meant that profitability for most of the companies and for farmers plummeted. Company returns expressed as average net profit after tax to book equity fell from 17.7% in 1984 to 6% in 1986. Prices received by farmers fell from an average of about $40 in the years 1978 to 1985 to $17 in 1986 (Garway Report, 1988). Farmers responded to the loss of subsidies and falling returns by cutting back on stock. The fall in stock numbers placed pressure on the newly expanded industry killing capacity, revealing large overcapacity. In 1985, the companies commissioned a report through the Meat Industry Council on the meat export industry (PCEK,1985). This report recommended that industry restructuring should be carried out through inter company co-operation over closures. In 1986, Whakatu in Hastings was closed, the first of a crop of closures up and down New Zealand.

But closures were not the only way the industry attempted to deal with its problems. Encouraged by the deregulation of export licensing in 1981, companies began to consolidate through mergers. Farmer-owned co-operatives now dominated the industry and multi-plant companies such as Affco and Alliance came to the fore.

The meat companies had also tried to limit the effects of the increased numbers of butchers on the chain by keeping wage increases below the average national growth in wages. In real terms butchers wages decreased through the 1980s.

Lastly, management sought to ameliorate the effects of the industry problems with the introduction of new technology which was starting to become available, designed to mechanise some of the more labour Intensive aspects of the chain slaughtering process. It was hoped this would replace labour, increase productivity and improve quality.

In 1988 a union-financed report on the meat industry was published - The Meat Industry - Strategies for Change. The report was the meat industry unions' analysis of the crisis in the meat industry and recommendations for change and was intended to be set alongside the PCEK Report (1985). The union study raised questions about the manner in which new technology was introduced into the industry and suggested that some freezing works achieved better results than others.

The union study reported several problem areas with the introduction of new technology. In particular the report states that there is "strong evidence to suggest that the PCEK report and MIRINZ projections of cost savings seriously underestimate the costs involved in implementing and maintaining the technologies." (p 33). These fears were borne out in a study funded by the Alma Baker Trust (Addison et al, 1997).

1.4 *The ResearchDesign*

This is a study of the process of change in four plants in the meat freezing industry. Each plant was undergoing technological change on the primary slaughtering chain system - the heart of the entire process. The four plants were chosen on the basis of size - two larger plants and two smaller plants - so that some allowance could be made for size effects.

The approach taken is a qualitative one intended to capture the process of change. The phenomenon of change being studied falls into the Yin's definition of when to use the case study methodology, in that the boundaries between what is being

studied and the context in which it is embedded are ambiguous and unclear (Yin, 1989, p 23). Miles and Huberman recommend the use of qualitative research where processes and causality in organisations are the subject of study (Miles and Huberman, 1994). To answer questions about the process of change in a complex social setting entailed asking "how" and "why" questions in order to capture the rich data (Richards, 1991) and to allow retrospection - a process of analytic induction (Manning, 1982).

A multiple case study approach is used and data was collected through semi-structured and informal interviews with staff at all levels within the plants, senior staff at Head Office, national union officials and producer board officials. Data was also gathered through observation and secondary data such as production records were also used.

A temporal element was added through making three visits to each site over a period of 2 years. I spent a week at each plant each time as well as a one day initial scoping visit at the outset.

The original aim of the research was to discover what it was that these managers did to manage the change process. I had a model of the change process derived from the literature which was part of the a priori preparation and which I intended to test but I quickly found that this model had little explanatory power in terms of the data I was gathering. I found that all the plants used approximately the same prescription for the process of change - prior warning and some degree of consultation and negotiation and training. Wages were guaranteed to remain at least the same levels and displaced staff could take redundancy or be redeployed. However, even though the plants used similar prescriptions for change, involved the same unions and the same technologies, I found that outcomes were different for each one. Some plants were clearly more successful than others at managing change. At the same time I was gathering data which demonstrated that dominant paradigms and management style varied considerably from plant to plant and that it was these factors which appeared to contribute more to the degree of success than the prescription used for the management of change.

Analysis of data was carried out through the use of a sophisticated content analysis software programme called Nudist. This allowed systematic exploration and coding of the data and also facilitated frequency counts of occurrences of coded items in the data.

1.5 *Thesis Overview*

Chapter 2 begins by covering the literature on change management examining current theories on *why* organisations change. A range of theories are canvassed including contingency theory as well as ecological and institutional perspectives. These theories will embody the roles of the macro-environment and organisational history as well as aging and maturing processes in the management of change.

Secondly, the chapter examines the literature on *how* organisations change. These include life cycle models (Greiner, 1972; Tichy, 1980), punctuated equilibrium models (Tushman & Romanelli, 1985) and the role of politics and culture.

In particular, the review highlights two major perspectives on change management:

- change as a sequence of discrete steps (Nadler, 1981; Tushman, Beckhard)

- change as an unfolding process (Kanter et al 1992, March, 1981)

The chapter then examines what these theories have to say about the determinants of successful change - leadership, communication, learning and empowerment.

Lastly, the New Zealand literature on the culture of the industry is examined, focusing on the New Zealand literature on labour relations and conflict in the industry. This literature broadly supports one of the contentions of this dissertation that the quality of management has a significant effect on the level of conflict in any given meat plant.

Chapter 3 sets out the methodology and research structure and explains what case study research is and why it is are used here. My sources of data, and how the data was collected are detailed. The method of analysis of the interview data is

explained and issues of validity and reliability are explored. The issue of how "success" is measured using payback times for the new technology is explained and justified.

Chapter 4 details the measures of success used in the research, particularly the manner in which payback times for the plants are derived and used.

Chapter 5 establishes a broad industry context in which the research is set. It looks at the history of the industry, the role of technology in the industry and its place in New Zealand's macro-economy and the technology used in processing. The actual new technology used is detailed and "new technology" is defined.

Chapters 6 - 9 are expositions of the four plants. Each chapter is a synthesis of of the plant "story" and analysis of the data. Each chapter contains a description of the plant and its history and the "story" of the implementation of new technology. The stories are illustrated with data comprised of excerpts from the interviews, observation and secondary data from plant and union records.

The findings from each plant are summarised and synthesised in Chapter 10 where the four pathways to change are mapped out. Lastly, Chapter 11 concludes the study by asserting that the "change as an unfolding process" view is supported. The factors which lead to harmonious change are explicated. The limitations of the present study are examined and possible future paths of research stemming from the conclusions are explored.

Chapter 2

Literature Review

2.1 *Overview.*

The objective of this literature review is to critically examine the literature on change in organisations. The review first examines the organisational change literature, dividing this into three organisation theories proper, - change models - operational models and change practices. The utility of these in terms of their ability both to explain organisation change and to assist managers to actually implement change is critically examined. The emergence of literature showing the importance of informal processes within the organisation in relation to change is discussed. To conclude the review of organisation theory and behaviour literature the crucially important role that trust plays in the success of organisation change is examined. Finally, I include a review of New Zealand literature on conflict in the meat industry and conclude that this literature tends to support some of the findings of this dissertation.

2.2 *Change Theories, Models And Practices*

In reviewing the wider literature on change, we find that there are three levels of analysis (Fig 2.1) The primary level of the main organisation theories, for example Contingency Theory (Burns & Stalker, 1961; Woodward, 1965, 1970; Thompson, 1967; Lawrence & Lorsch, 1967), Institutional Theories (DiMaggio & Powell, 1983;); Resource Dependency Theory (Pfeffer & Salancik, 1978) and Population Ecology Theory (Aldrich, 1979; Hannan & Freeman, 1977, 1989; Singh & Lumsden, 1990; Carroll, 1988); a secondary level consisting of change models, for example

Congruence Theory (Nadler, 1981)) which builds on Contingency Theories and attempts to explain what it is that must be changed. The third, or tertiary level, consists of frameworks and practices which are intended to be operationalised. This level has two kinds of practices. The first are prescriptive models which offer "how to change" formulae, for example, Beer (1976), Mohrman and Cummings (1989), Beer et al (1990) and Jick (1993). Typically these attempt to address processual elements which impact on phenomena such as resistance to change. Secondly there are models deriving from Total Quality Management and Business Process Re-engineering which have little to say about the process of change itself but describe an organisational configuration which contains elements and notions such as continuous improvement.

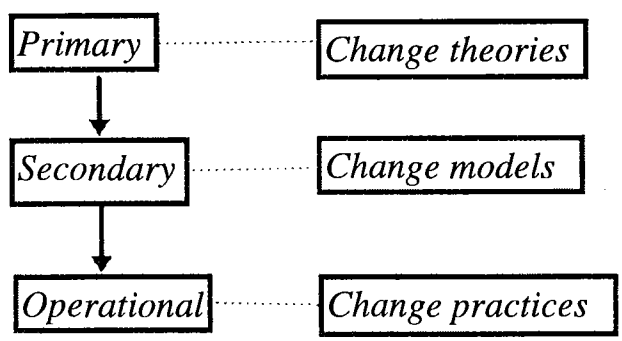


Figure 2.1 Three levels of analysis of change

This review will show that there is an emerging move towards greater integration both inter and intra the three levels.

2.3 *Organisational Change Theories*

Organisation theories are, either explicitly or implicitly, theories of change. These theories focus on the structure/content - what is changed - and why organisations change but have little to say about the process of change - how change is

actually brought about and implemented. Except for population ecology theory, organisation theories take the single organisation as the unit of analysis but in order to gain understanding of the process of change we need to move to the sub-organisational level to examine sub-systems within the organisation.

The major theories include Contingency Theories (Burns & Stalker, 1961; Woodward, 1965, Thompson, 1967; Lawrence & Lorsch, 1970); Population Ecology, (Hannan & Freeman, 1977, 1989; Singh & Lumsden, 1990; Carroll, 1988: Aldrich, 1979); Institutional Theories (DiMaggio & Powell, 1983) and Resource Dependency Theory (Pfeffer & Salancik, 1978);

These theories deal with structure/content (what is changed) but have little to say about the process of change - how change is actually brought about and implemented.

2.3.1 *Contingency Theories*

Since the 1970s, contingency theories have proved to be the most influential on theory and practise of management. Contingency theories grew out of open systems theory (Bertalanffy, 1967; Katz & Kahn, 1978) in the 1960s and are based on the notion that there is no one best way to structure or operate an organisation. Rather the "right" structure and operation is dependent on contingent exogenous and endogenous factors and the interrelationships between them. This was a break with previous Classical (eg Taylor, 1911; Fayol, 1949; Weber, 1946) and Human Relations (eg Argyris, 1964; Likert, 1961; McGregor, 1960; Mayo, 1933) schools which adopted differing but unitary, one-best-way approaches to structure and operation.

The contingency approach portrayed the organisation as an open system whose structure and function is determined by certain exogenous and endogenous contingencies. The most studied and key contingencies are size, (of organisation) (Blau, 1970; Mullins,1989; Pugh et al, 1969a and b; Scott, 1987), environment (Burns & Stalker, 1961; Child, 1984; Lawrence & Lorsch, 1967; Pugh, 1984; Robbins, 1987; Thompson, 1967) and technology (Hickson et al, 1969; Perrow, 1967, 1970; Thompson, 1967; Wood, 1989; Woodward, 1965, 1970). So contingency theories can indicate what form that structures and processes should take given certain factors within the organisation and/or the environment. The most celebrated theory is that of Burns and Stalker (1961) which proposes the turbulence and uncertainty of the environment as the critical independent variable and specifically holds that an organisation in a turbulent environment should adopt an organic form and one in a less turbulent environment should adopt a more mechanistic form. Their organic and mechanistic forms closely resemble the Human Relations and Classical forms respectively. Thus although contingency theory was a break with what preceded it in terms of its application, it builds on previous management theories. Classical and Human Relations theories were competing paradigms, each claiming that their theory was the one-best-way. Contingency theories hold that either approach is valid, depending on the circumstances pertaining to any particular organisation. Lawrence and Lorsch (1967) built on Burns and Stalker's research and asserted that not only should an organisation's structure and operation vary contingently, but that different parts of the same organisation may vary according to the particular task/function. For example they found that in the organisations they studied, the research department may be structured differently to the manufacturing department,

depending on the degree of differentiation and integration necessitated by the form of the prevailing dependence relationships.

This theory, in common with all the theories at this primary level, explains what to change and why but offers no help at all as to how to implement such change. In addition to this, Contingency Theories are limited in two other ways (Narayanan & Nath , 1993: 126-128). Firstly, Contingency Theories have not examined in a systematic way factors which are significant in the functional sub-systems of organisations such as social and political factors for example. As organisation sub-systems are interdependent (according to open systems theory), it is possible that causality may reside within these ignored factors. So extant explanations about fit between sub-systems are incomplete and subject to qualification (see for example Nadler, 1981).

Further, contingency theories use the formal systems of the organisation to examine propositions regarding fit between structure/operation and contingencies. Yet it has been known since at least the time of the Hawthorne experiments (Rothlisberger and Dickson, 1938) that the informal structures in an organisation have a significant impact on the operation of the organisation. This point was noted by Woodward (1965) when she found that organisation charts in organisations she studied did not reflect accurately the actual working relationships observed. This point is extended by the Human Relations school who argue that contingency theory tends to be over deterministic and ignores the actual complexity of organisation dynamics in action. Organisations are seen as social systems and structure/operation is at least partly determined by social/ political process (Pfeffer, 1981; Salaman, 1979).

Contingency Theory does not address the problem of implementation as it does not offer a theory of *how* to change. Implementation involves elements of the sub-systems such as the social and political about which Contingency Theory says little. So Contingency Theory may point out what are "good" organisational forms but not how to get there from wherever the organisation is.

Another criticism of contingency theories is that they are highly pragmatic in orientation and lend themselves to replacing a one best way approach with a *set* of one best way approaches based on objective contingency factors. This is seen as encouraging practitioners to sidestep human and social issues in the name of exigency. In addition to this criticism, Scott et al (1972; p 67-68) go on to say that they feel that Contingency Theory is useful as a tactical, short range tool for solving short range problems but "The danger of Contingency Theory arises when it is elevated to the status of a *strategic theory.* Then it becomes a theory of organisational change and a philosophy of organisational progress - two functions that it is ill equipped to perform." (see Scott et al, 1972, 67-68).

In summary it would appear that Contingency Theory has something to offer as a theory of change in that it may indicate what it is that should be changed but offers little about how to change. Further, because Contingency Theory has not closely examined the role of social sub-systems in the organisation, the "solutions" offered may well ignore much of what human resource theorists feel is critical in the process and management of change. Some attempt has been made, however, to accommodate informal process in the contingency framework in Congruence Theory which we will examine in the section concerning secondary models of change. In - particular, Burns & Stalker's and Lawrence and Lorsch's Contingency Theories point

to the importance of the informal systems in an organisation implicit in the organic mode.

2.3.2 *Population Ecology Theory*

Population Ecology Theory (Aldrich, 1979; Hannan & Freeman; 1977, 1989; Singh & Lumsden, 1990; Carroll, 1988), based on the analogy of natural selection in biology, has as its central tenet that organisational forms that are best fitted to the environment are the ones that survive. Change, here called "adaptation", in organisations occurs at the population level as organisational forms that are better adapted to the prevailing environmental exigencies survive while those that have not adapted decline. While managers do have a very limited ability to ensure survival through adaptation of the organisation, organisational change is seen to be exogenously stimulated and the processes of change are ultimately controlled by the environment. Hannan and Freeman (1977) maintain that population ecology is an alternative explanation of organisational change to structural contingency theory. Change does not come about at the individual organisation level through rational, adaptive behaviour by managers but rather by adaptation through births and deaths at the population level. Population Ecology is more a theory of organisational *survival* than organisational *change.* Whether a particular organisation survives or not is as much a matter of chance as it is of managerial action. Thus Population Ecology has little to offer a manager who seeks ways of managing change, implicitly characterising the manager as a virtually helpless prisoner of environmental contingencies and random effects. Population ecology theory is based on a study of

the external characteristics of organisations and thus has nothing to say about internal organisational characteristics (Davis & Powell, 1992; 354).

However as Donaldson (1995, 45) points out, Population Ecology Theory can be viewed as complementary to Contingency Theory in that they are both types of structural-functionalist theories. Contingency theory holds that an organisation's structure should be in fit with its environment if it is to optimise performance, while population ecology theory would hold that any such structuring would increase the probability of survival.

2.3.3 *Institutional Theory*

Institutional Theories (Di Maggio & Powell, 1983; Zucker, 1987) view change in organisations as being brought about through interaction with the institutional environment in which they exist. Certain ideas and practices among groups of organisations become dominant through a process of legitimation by adoption and acceptance by influential bodies such as state and professional organisations (Donaldson, 1995, p 79).

Zucker (1987) sees this process of legitimation as being brought about through widespread acceptance of certain approaches and ideas so that they become the norm and alternatives are not considered. Di Maggio & Powell (1983) focus on imitation as the source of change in organisations. They maintain that change in organisations comes about as a result of "institutional isomorphism" where organisations operating in the same sectors change by coming to resemble each other more and more because of factors such as the uncertainty arising from the complexity of the environment and

shortage of information. Di Maggio and Powell propose three types of isomorphism: coercive, mimetic and normative.

Coercive isomorphism implies little choice on the part of managers and refers to the way in which agencies external to the organisation may force certain changes through, for example, legislation, the demands of sources of finance or the desire to be legitimised in the eyes of larger organisations.

Mimetic isomorphism concerns straight imitation of another, usually peer, organisation in the face of uncertainty as to how to proceed. Organisations perceived as being successful are used as the model and this legitimates the managers and their strategies. Implicit in DiMaggio and Powell's work is the notion that managers do not engage in isomorphic activities in order to optimise the performance of the organisation. Rather they do so simply to legitimate their activities and that this is essentially irrational behaviour which leads to managers adopting the form rather than the content of such changes as TQM. Donaldson (1995, 82-83) points out the ambiguity of these claims. Donaldson feels that it is just as easy to attribute rational, functionalist motives to such imitation as it is to attribute the baser motive of merely seeking peer approval.

Normative isomorphism refers to the manner in which professional groups of managers "learn" the correct structures and strategies through, for example, business schools. Donaldson (1995; p 84) criticises DiMaggio and Powell (1983) on the grounds that these three types of isomorphism are not discrete categories with each type sharing definitional elements with the others. Normative isomorphism could also be seen as straightforward learning behaviour by managers rather than irrational mimicry for ulterior purposes.

This theory attempts to explain how organisational change comes about through the process of various types of mimetic behaviour. Institutional theory is put forward as an alternative to structural contingency theory in explaining why organisations change but, unlike that theory, it does not offer managers an outline of why or what to change - it is merely explanatory. Notwithstanding Donaldson's (1995) strong and well founded reservations about isormorphism, the theory may well hold some degree of explanatory power for some management behaviour, especially in terms of the introduction of new technology and processes such as TQM and "downsizing". But in terms of prescriptive assistance for managers who may wish to know more about how to change, or what to change, these theories offer no assistance. They are predicated on the notion of the manager as a rational actor whose only options are to choose actions which will lead to legitimation.

2.3.4 *Resource Dependence Theory*

Resource Dependence Theory (Pfeffer and Salancik, 1978) puts forward the notion that the major dilemma for an organisation is that of acquiring resources from the environment. Change in an organisation is brought about by the organisation's attempts to maintain control of changing resources. This may operate either inside the organisation or between the organisation and its environment. Pfeffer and Salancik (1978) emphasise that internal processes within the organisation play only a small role in the emerging changes in the structures and processes of the organisation as it attempts to secure requisite resources from the environment. The chief processual mechanism is in the political arena. Managers lobby and seek to influence external controllers of resources and this in turn brings about shifts in internal power balances

which affects phenomena like executive succession. The trigger for change for resource dependence theorists is environmental factors and the need for external resources. Internal process and structure are largely ignored and organisational change is portrayed as a political drama acted out by senior managers engaging in power plays, lobbying and so on.

Resource Dependency Theory has little to offer as a theory of change which can help managers to effect change more efficiently.

2.4 *Organisational Change Models*

Change models (Greiner, 1972; Nadler, 1981; Nadler & Tushman, 1977, 1980; Dunphy & Stace, 1988; Tushman et al, 1986) attempt to explain either what it is that *must* be changed and why it must be changed (eg Nadler's Congruence Theory, looking at internal elements) or what *is* changed (eg Greiner's Organisation Life Cycle model, at a higher level of focus). Even though some of these theories do refer to processual elements within the organisation, there is little to assist the manager who wishes to know more about how to implement such models and theory.

In 1972 Greiner published an influential article building on Chandler's (1962) work that suggested that organisations change as a result of growth and that they go through five phases of evolution as the organisation slowly adapts to growth and short periods of revolutionary change prompted by the gathering stresses engendered by the growth related micro changes. This Organisation Life Cycle (OLC) model has been criticised on various counts but perhaps the most important criticism is that Greiner's model ignores the role of the environment in bringing about organisational change. Thus the model is incompatible with open system contingency theories. The five

"crises" that occur during the life of an organisation each have different characteristics and correspondingly different structures and processes. Greiner describes these structures and processes but nothing is said about implementation or social processes. The OLC model was improved with the introduction of open systems thinking and environmental contingencies in the Punctuated Equilibrium Model (Tushman et al, 1986) who began by noting that "a snug fit of external opportunity, company strategy and internal structure is the hallmark of successful companies"(p 30). This introduced both exogenous and endogenous sources of change stimuli and Tushman et al built on Greiner's evolution and revolution model to offer a convergence and upheaval model. Tushman et al's model examines the internal processes of change, arguing that upheaval or frame-breaking change should be carried out quickly in order to lessen the risk of pockets of resistance to change growing. Sources of such resistance are identified, for example, individual anxiety arising from uncertainty, the formation of political coalitions determined to maintain the status quo and loss of control caused by the uncertainty and ambiguity of change. These two models contributed to our understanding of organisational change, in particular drawing attention to incremental change and frame-breaking change - or continuous vs discontinuous change - and the need for different management techniques for each one. Tushman et al go further than Greiner in taking an open systems, contingency view but fail to tell us how to implement such changes except in a general, descriptive manner. For example, their model suggests that incremental change calls for a participative approach and a frame-breaking change needs a more coercive approach. However, this contribution was a considerable step forward from the Greiner model.

The assertion that incremental change should be carried out collaboratively and frame-breaking change carried out more coercively was challenged by Dunphy and Stace (1988). They felt that which mode - participative or coercive - should be chosen depended on how far out of "fit" an organisation was, the degree of support for change and how much time there was to implement change. This formulation generates a two by two contingency table with four types of change.
Dunphy and Stace's model does give the manager some guidance on which strategy to use when contemplating change but once again tells us little about how to actually bring this off.

The last model reviewed here is Congruence Theory (Nadler & Tushman, 1977) which uses an open systems, contingency perspective and also provides a bridge between change models and change practices. Unlike preceding models reviewed here, Congruence Theory focuses on the management of the change process (Nadler, 1981). Nadler examined the transformation process (Beckhard & Harris, 1977), which he saw as the key, transitional part of change, which is constituted from four interdependent sub-systems; the informal and formal, the task and the individual. According to Nadler, the organisation will be most effective when these four sub-systems are congruent with each other. In accordance with open systems theory, any change in one sub-system will necessitate adjustment of the others. Nadler identified three potential problems with change during the transition process. The first is the problem of power arising from uncertainty and ambiguity as groups attempt to capture some of the advantages arising from the change. The second problem is the anxiety among individuals arising from the stress and tension of change. Thirdly, change creates discontinuities in established procedures and it becomes difficult to control

and monitor individual activities. Nadler maintains that these problems can be managed through the use of specific "actions steps to manage the transition" (p 202). He then goes on to elaborate these into a set of recommended actions very much like one of the change prescriptions which we will turn to next in this review. The important point here for our purposes is that Nadler puts the informal processes squarely in focus in considering the implementation of change and emphasises their importance even though he fails to go beyond a simple prescription.

2.5 *Change Practices*

There are two kinds of change practice frameworks. Firstly there are those which offer various prescriptions and recipes for how to implement change successfully. Processual elements such as resistance to change, communication are referred to. Secondly there are change practice models such as Total Quality Management and Business Process Re-engineering which have little to say about the process of change itself but are implicitly change practices.

The prescription and recipe practices (Eg Beer, 1976; Mohrman and Cummings, 1989; Beer et al 1990 and Jick, 1993; Kotter, 1995) although appearing to offer a "how-to" of change management, in fact more typically offer a linear list of actions that should be taken. They are typically similar to each other in that they offer various formulations in differing numbers of steps. There is little difference between the content of one approach to that of another. They all attempt to deal with what are perceived to be the major problems connected with change initiatives. For example, resistance to change is dealt with by adequate warning of change and some degree of participation with employees concerned with the proposed change. Although such

prescriptions purport to be different to each other, examination of them finds more shared characteristics than exclusive ones. It is possible to claim that these prescriptions have become, over time and through repetition, normative in nature. Kanter, (1983) appears to be one of the very few writers moving beyond this standard formula by adding the "pre-history of change step" which makes the vital step of linking the change process to the ongoing continuity of organisational processes.

2.5.1 *Organisation Development Practices*

Earlier Organisation Development (OD) practice was based on Lewin's (1951) three stage model of change; unfreezing, moving and refreezing. This basic model was elaborated into processes for planned change involving seven or more steps, for example Lippit et al (1958) and Kolb & Frohman (1970). These practices are basic stepwise prescriptions of how to implement change and as such they go beyond the models at the secondary level of change. However, later OD practices are based on the traditions and concepts of action research (French, 1969; Frohman et al, 1976) which involve a cyclical process where the change agent gathers data and then uses this to guide further action. Action Research practices are particularly concerned with the process of change and in training managers to become the change agents and to install the action research based change into the organisation. These practices are in fact about *changing* rather than *change* and thus move beyond simple prescriptions of how to change but there is once again a stepwise prescription of how to do this.
A major problem with Organisation Development practices based on action research is that they often do not move beyond the first stage in the process, that of entering and contracting (Cummings & Worley, 1993, p 59). The reasons for this are many but

centre around fears that arise when managers and other employees begin to understand the radical nature of the process and just how much they may be at risk. This practice may also prove to be very costly in terms of time resources and to require a large commitment from everyone in the organisation. It is interesting to note that Organisation Development, which appears to offer a better solution to the major barrier to successful change implementation - lack of trust leading to resistance and so on - itself is the source of resistance because of the very radical nature of the process which requires a high degree of trust. Espoused Organisation Development practices tend to overlook the prior context which is at odds with Lewin's original thoughts on change management which was that we should grow the change process from the seeds existing in the organisation (reported in Weisbord, 1987, p 72). Once again we are left with the conclusion that change must start before we start changing.

Another noteworthy aspect of Organisation Development for our purposes here is that, although rarely implemented fully, the ideal intention is not only to bring about some specific change but to go further and install a *way of changing as normal process*. This leads us back to the critical importance of continuity and enables us to take this idea a little further. It would not be unreasonable to characterise continuity itself as change. The concept of continuing does not mean merely remaining static. It denotes movement forward - in other words change.

2.5.2 *Total Quality Management*

Total quality management (TQM) is a concept which is now widely accepted and established in organisations throughout the developed world. When the trauma of rising Japanese industrial strength was first felt in the West, particularly in the USA, the reaction was similar to that triggered by the first Soviet Sputnik launch. The

invincible manufacturing efficiency of the USA was seriously threatened by the Japanese, a people whose industrial practices and products had, in the three decades since WW11, become a byword for shoddiness and lack of innovation. Like some alien invasion, they were suddenly here amongst us, with cheaper, better products, particularly cars, much better suited to a post oil crash world. The search for causes of this success often arrived at the conclusion that a great deal of the productivity/quality gap was engendered by social/cultural forces indigenous to the Japanese (eg Ouchi, 1981). However, at the heart of much of the work design of the car manufacturers, particularly Toyota, was a system based on the work of Deming (1982), an American. This system - TQM - was something tangible that could be understood by Western engineers and managers. It appeared to be based on statistical control techniques and this was something readily assimilated by Western managers. TQM systems were widely recommended as a "cure" for the problems of Western industry and could be imported into Western organisations with few problems and with little change to the social/cultural values of employees (Crosby, 1979; Deming, 1986; Juran, 1986).

There is a plethora of "how to" books and articles in the popular press and many consultants earning high fees from advising on how to implement TQM programmes in organisations. TQM is now a concept readily recognised by most managers and is taught as a stand alone subject in many business schools, but TQM in practise has been described as "an amorphous collection of tools and techniques" (Nilakant, 1997).

Despite the amount of advice and the number of practitioners and consultants, TQM has enjoyed only limited success in the West and the failure rate is reported to

be high in the popular press (Fuchsberg, 1991a, 1991b Training and Development, 1992). Some estimates put the failure rate as high as 80% in the UK and 66% in the USA and there is a growing feeling among many managers that TQM is "too hard"(The Economist, 1992).

There are many possible causes of the high failure rate. For example, the expectation on the part of many managers - no doubt encouraged by consultants - that the benefits of TQM would be immediate. The experience of successful implementers of TQM is that this is a long term project - anything up to 10 years and beyond (Perry et al, 1995). This long term commitment to building an ongoing, evolving system is not one which sits comfortably with the short term exigencies forced upon many of today's managers. But probably one of the greatest sources of problems with TQM is the failure to understand that it is not just another technique that may be bolted on to the organisation to make it more efficient (personal communications with managers). TQM itself embodies a philosophy of continuous change and implicit in any TQM programme is a radical change of culture. Implementation of such a radical programme is not easy and the standard guidance for implementation tends to contain only basic step-wise "how to" formulae based on the standard change prescriptions. The notion of Kaizen (Walker, 1983), one of the five central elements in TQM-as-lean-production (Womack et al, 1990), implies continuous improvement which itself implies continuous change. Thus TQM, like OD in its original form, is designed to be a process that changes the organisation in a way that renders change a continuous activity.

2.5.3 *Business Process Re-engineering (BPR).*

Because of the unforseen problems in implementing TQM experienced by many managers, TQM is now acquiring the reputation of being just another management fad (Main, 1991; Tetzeli, 1992) The rising star set to eclipse TQM in the corporate firmament is BPR. Unlike TQM, BPR has a relatively discrete body of literature and advocates (Hammer & Stanton, 1995; Champy, 1995). Based around new technology in the form of information systems, BPR attempts to flatten organisations through removing layers of middle management and empowering employees and uses a zero based approach by asking of each function - do we need to be doing this? (Hammer & Champy, 1993).

Although BPR is a recent phenomenon, we already have reports of failure rates over 50% (Belmonte et al, 1993; Hall et al, 1993; Stewart, 1993). Revenaugh (1994) sees faulty implementation as the major cause of failure while Schonberger (1994) carried out a survey of BPR and TQM implementations and found that the reasons for failures were varied. Amongst the reasons cited were a lack of commitment from senior managers, a short term orientation and, perhaps most importantly, inappropriate human resource management practices. This points to the source of failure as lying in the area of the social sub-systems.

Both TQM and BPR attempt to bring about a more organic form in the organisation in order to create a flexible, innovative and more productive system. In short they attempt to bring about, through adopting a more organic form, a system or systems

which can not only cope with a changing external environment but also to proactively generate change as innovation as the process of continuity - as the normal mode of operation.

Finally, although there are some indications of why so many change initiatives fail or do not realise expected gains, there has been little serious attempt by management theorists to discover the reasons why (Reger et al, 1994)

2.6 *Integration Between the Three Categories of Change Literature*

For a theory of change to be useful to practitioners it should have the quality of being operationalisable at the third stage - that of the change practise. There should be a clear interpretative chain from the higher levels to the lower levels. Practise should be informed by models of change which should in turn be derived from the primary level theories.

There are very few attempts to do this evidenced in the literature and little importance attached to this feature of theory. Nadler's Congruence model is one of the few which does attempt to integrate the primary level structural contingency theory as an integral part of the model, but this is not extended into the third stage. There is a lack of integration between theories, models and practices, both within their respective levels and a lack of integration between the three levels. For example, at the primary level, theories tend to compete in a manner which is mutually exclusive. Population Ecology, Resource Dependence and Institutional theories were posited by their authors as alternatives to both the dominant paradigm - structural contingency theory - and each other in terms of explaining how organisations change. Attempts to reconcile these conflicts may sometimes border on the ludicrous as

Donaldson (1995) cogently points out.

It is also hard to reconcile innovation, BPR and TQM practice with espoused contingency theory. Contingency theory as it is interpreted holds that for any given set of environmental circumstances there is an organisational form which is more ideal than other forms. In particular, Burns and Stalker's research indicated that in stable environments, the mechanistic form is more efficient and in less stable environments, the organic form is more suitable. However, organisations today are constantly exhorted to be continuously improving (changing), to become leaner and flatter with more participatory practices - no matter what kind of task/environment they operate in. These modes of operation are very close to the organic mode recommended by Burns and Stalker (and Lawrence and Lorsch) yet these forms are starting to assume a normative character as exemplified in practices such as TQM, BPR and the Learning Organisation (Senge, 1990). Within organisation theory literature there is little sign of any attempt to reconcile this inconsistency between the organic form as it is practised and in its theoretical role as part of contingency theory, which currently occupies the dominant position in organisation theory.
We must look to another area where there appears to be an effort to integrate change theory, models and practice - the field of innovation studies.

2.6.1 *Innovation as change*

The research on innovation is not strictly speaking a part of organisation theory and has a separate literature to that of change management. There are many definitions of innovation in the literature but many of these include new processes of production within the scope of innovation (Kanter, 1983; Zaltman et al, 1973;

Damanpour, 1991) so it is reasonable to draw on some of the research in this area to help to extend the argument put forward above.

An examination of the innovation literature shows that the field is replete with change models and prescriptions which draw on those developed in organisation theory and sharing the same problems that they do. Of particular interest to this review is that a major departure from change management theory proper is shown by some innovation writers who are linking contingency theory with innovation theory. They are drawing on Burns and Stalker's work in an attempt to respond to the inherent problem of mechanistic organisational forms which, by their nature, are less flexible and do not provide a fertile ground in which to generate or implant innovatory practices and products.

Beginning with Thompson (1967) through to Spender and Kessler (1995) there is an emerging recognition that the change process requires an organic mode and that organisations need to sustain a dual mode form which contains both organic and mechanistic forms - moving away from Burns and Stalker's mutual exclusivity. In the organisation theory literature Finne (1991) notes the importance of the organic process to the implementation of change. The crucial point here is that there is emerging recognition that the change process in an organisation requires a more organic form than the sustaining process and that this organic mode is closely related to the informal system. I will return to this point later.

However, Spender and Kessler point out that even if an organisation adopts a more organic form - as well as a mechanistic form - in order to cope with change - we then have the further problem of how to manage this interface between the two modes. They propose a model for achieving this but an integral part of this model is the, by

now standard, prescription for managing innovatory change. Like most of the organisation change models, these prescriptions are basically a series of structural steps and do not deal with dynamic, processual elements.

2.7 *Change as a Messy Process.*

Some writers, commenting on the high failure rate of change implementations (Duck, 1993; Revenaugh, 1994; Vrakking, 1995) point to the inadequacy of third stage change models and practices. Various reasons are put forward for implementation failures but there is an emerging view which asserts that implementation problems stem from these models' failure to recognise the essential "messiness" of the change process, that change is not an orderly, step by step process, amenable to step by step, programmed solutions. Writers such as Kanter et al, (1994) and Duck, (1993) point out that the change process cannot be easily reduced to a simple set of steps - a recipe - that, if followed faithfully, will result in success.

Much of the chaotic nature of change stems from the influence of less tangible aspects of the organisation - the informal systems, culture and so on. In particular Kanter talks about the importance of the "building blocks of change" and "the prehistory of change". The first building block of change for Kanter concerns conditions in the organisation *before* the change implementation begins - the prehistory of change. A negative precondition will be change aversive and vice versa. The prior context of continuity in which change is embedded is of critical importance to the success of the change.

So what is it about organisations and the people in them that makes change so difficult? Starting with researchers such as Roethlisberger in the 1930s at the Hawthorne Works, we have been aware of the impact that the social elements and dynamics of the "informal system" have on performance, morale and general organisational health. There is also a large body of literature on the importance of organisational culture, which largely concerns the workings of this set of beliefs, norms and so on and their effects on performance. Unfortunately most of this literature has the same inherent fault of much of the practitioner oriented approaches to change in that they assume an essentially managerial viewpoint. There is an assumption that the culture of an organisation is a unitary construct, subject to change by managers.

Clues to the elements which impact on successful change are scattered throughout the change literature. For example, Congruence Theory includes the informal system as one of the four central elements which must be maintained in congruence with the others. Burns and Stalker (1961) devoted a lot of attention to the informal processes within the organisation and Spender and Kessler (1995) go as far as to equate the organic system with the informal system in its impact on the change process. They characterise the informal system as being the "glue" that holds the organisation together when faced with uncertainty and change. In discussing the means by which organisations maintain continuity during periods of disjuncture, Ouchi (1980) and Wilkins and Ouchi (1983) referred to "clan" control which operates through the informal systems, beliefs, norms and values of the organisation. Orton and Weick (1990; p 211), in seeking an answer to the question of "what it is that holds together a loosely coupled system?" suggested that the "glue" is the shared values and

meanings in the organisation. When an organisation is undergoing change, the "formal" systems undergo discontinuity and the uncertainty levels rise, leading to the potential for rising resistance and other negative symptoms.

This anxiety produced by change is well documented in the literature (Kotter & Schlesinger, 1978) and the responses to this in the operational stage literature is to increase communication, participation and so on. We have already alluded to the high failure rate for change processes using such prescriptions and that the reason for this appears to lie in the domain of the informal system.

In effect this means that in order to change successfully, an organisation must contain an informal system conducive to change - the social context of the employees must be positively aligned with the aims of the managers. If it is not - if the beliefs, myths and history of employees are negative and antithetical to the aims of the managers and to change, then it makes little difference which change prescription is adopted. From as long ago as the Hawthorn experiments we have known that the informal context may work against the aims of management and in the perceived interests of the employees. The change process will be less than optimal if these factors are ignored.

2.8 *Leadership of change*

There is also a growing literature on the efficacious effect that a "good" manager may have on the performance of the organisation and on change initiatives (Stewart, 1991; Ackoff, 1990; Nadler & Tushman, 1990; Tichy & Ulrich, 1984; Wolff, 1995; Kotter, 1995; Pettigrew, 1991). The data from this research indicates that the perceived quality of the manager, both as technically competent and as a

human being is a key factor in determining whether the contextual ground of the employees' informal system is sympathetic to or antithetical to management driven change initiatives. If the manager is perceived to be competent then employees will have confidence in them. This is particularly important at times of impending change where uncertainty generates anxiety and defensive behaviours. Employees need to feel safe. But perhaps most important of all, the manager must be trusted by the employees, not only in the technical sense which generates confidence but as a person who has integrity, will not lie to them, whose word they can rely on.

2.9 *Trust*

According to Mayer et al (1995) the topic of trust is "generating increased interest in organizational studies". The authors quote Gambetta (1988) who noted that scholars tend to allude to trust in passing as "a fundamental ingredient or lubricant, an unavoidable dimension of social interaction, only to move on to deal with less intractable matters." (P709). Mayer et al (1995) cite many authors who hold that trust is important in areas such as communication (Giffin, 1967), leadership (Atwater, 1988), labour-management relations (Taylor, 1989) and implementation of self managed work teams (Lawler, 1992). All of these areas have some bearing on the management of change. A selection of a literature search on "trust" renders a wide spread of topics in the professional journals for which trust is held to be a vital aspect. For example, change management itself (eg Holder, 1995; Raduchel, 1994; Wolff, 1995), leadership (Bennis 1996; Gadzinski, 1995), empowerment (Andrews, 1994; Kennedy, 1995) innovation (Staub, 1994), labour relations (Kelly & Kelly, 1991) and is seen as an essential ingredient in the "organisation of the future" (Handy, 1995).

Such a widespread citing of trust as an essential component of organisational dynamics in the more practitioner oriented journals leads one to ask why not more attention has been paid to this subject in the academic change literature.

One of the problems faced by scholars, perhaps one of the reasons why many have avoided the topic, is that of definition. Trust is a somewhat amorphous and intangible phenomenon which has been defined in different ways in different settings. Mayer et al (1995) set out to review the literature on trust and to build an integrative model of what trust is and how it works through a synthesis of extant views. The model they arrived at is shown in Figure 2.2

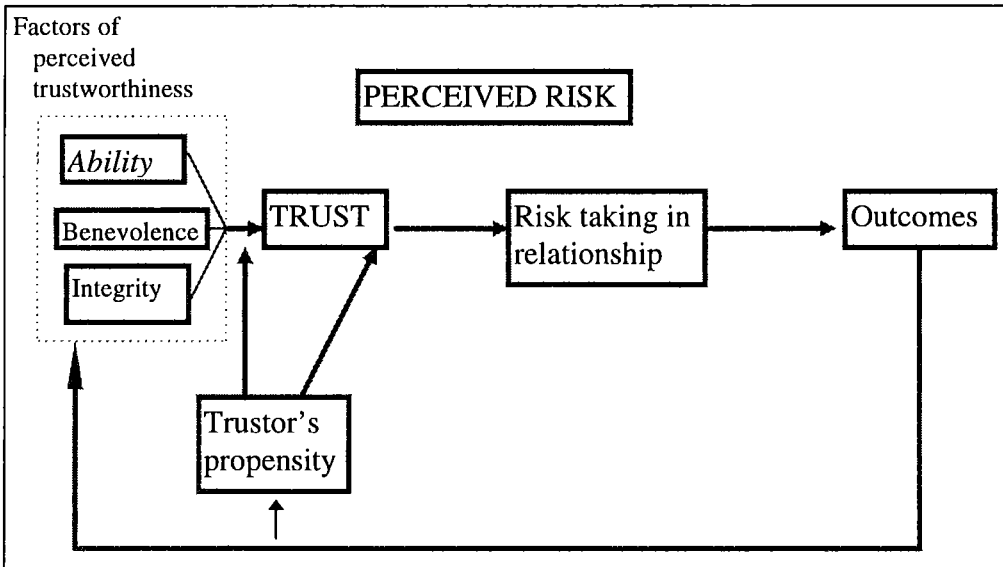


Figure 2.2 Proposed Model of Trust (After Mayer et al, 1995)

The combination of the elements - the factors of "perceived trustworthiness" - ability, benevolence and integrity - shown in Figure 2.2 make up "trust" or "mistrust", depending on the nature of the constructs, whether they are negative or positive. Mayer et al's model includes a feedback loop which points to the dynamic nature of trust which is less of a "thing" than it is an ongoing process between two parties. The

model proposes that trust will grow or weaken depending on the actions of the people involved and the effects of those actions on their perceptions in the three critical areas.

There appears to be a consensus among practitioners that trust is of vital importance to the management of change. So what is the exact role that trust plays in the management of change? Trust has been characterised as the "fundamental ingredient or lubricant....of social interaction" (Gambetta, op cit) and is a fundamental energiser of the informal system and a positive context of continuity.

2.10 ***Conclusion***

Where trust is present, a positive context is likely to be fostered and there is likely to be a higher degree of congruence between the social sub-systems. Trust is both the glue that holds the systems together and also the lubricant which helps it to move and change, especially in the face of uncertainty.

Some secondary level models derived from primary level theories do attempt to include the informal system in their explanation of how change occurs (Eg Congruence Theory). However Congruence Theory sees the informal system as merely another internal contingency which may vary in content and process. According to the model, successful change is achieved by ensuring that, as sub-systems change, the informal system is in congruence with the other three elements, the task, the individuals and the formal system.

A characteristic of these kinds of models is that they describe change as a discontinuity in the normal, ongoing processes of the organisation. The change process is typically conceived as moving the organisation or part of the organisation from state A to state B. Primary level theories examine what these states are and why change occurs, while change models attempt to show how the change comes about.

"Change" is actually "changing" and is another event, albeit relatively radical, in the ongoing life of the organisation. The critical factor in the management of change is not some new prescription to govern "change" but rather the nature of the processes of continuity within the organisation. It is these processes of continuity which fulfil two tasks. First they make up the "glue" which maintains the organisation's identity and which provide the context within which "changing" is embedded. Secondly they provide the "lubricant" which enables the change process to run more smoothly amidst the continuity. These processes of continuity are the informal systems, which are energised by trust.

Where does this bring us to? It appears that the process of change actually has its beginning in the processes of continuity which generate the contextual ground in which the change is embedded. *It is possible to claim that the maintenance of a positive contextual ground through the processes of continuity is of critical importance to the management of change.* Most of the change theories, models and practices at each of the three levels of analysis rely on a structural characterisation of organisational elements and change practices are couched in terms of structural "solutions" to the problem of change management. Where the informal system is mentioned it tends to be treated as if it were another independent variable.

The informal systems give rise to the contextual ground in which other variables are embedded and are enacted in an ongoing and dynamic process of continuity and change. In effect the dependent variable is not the change process but the process of continuity.

The debate over structure - whether it should be organic or mechanistic - becomes displaced by reference to a more profound level of analysis. Emerging literature points

to the manner in which these structures and formal processes are enacted through the contextual ground in which there are embedded. Finally the nature and quality of this contextual ground is to a great extent determined by the nature and quality of the people involved, in particular the senior managers' role in maintaining and fostering a positive context through generating trust.

This informal domain constitutes a "contextual ground" made up of, amongst other things, beliefs, norms, communication systems, and myths. Some writers, eg Kanter et al (1992), point to the critical importance of this contextual ground in promoting and fostering successful change. Kanter et al (1992) call this the "pre-history of change" and the first of the building blocks of change. However as we have known since the publication of the Hawthorne experiments, the beliefs and aims of this informal system may not be congruent with those of the organisation as a whole.

Emergent literature indicates that it is in this area, that of examining "ways of changing" as opposed to developing recipes and prescriptions, which is critical for understanding the dynamics and process of change management.

Much of the controversy and argument about organisation theories and their relative explanatory power and relevance (Donaldson, 1995) can be at least partially overcome if we focus on the dynamics of change. As stated above, organisation theories are theories of change. In particular, any organisation theory must be able to explain the dynamics of organisation change in a useful way because the ability to change or the process of changing is the quintessential, defining property of organisations when viewed as open, social systems. The promise held out by Burns and Stalker's and Lawrence and Lorsch's contingency theories as powerful means of understanding organisational dynamics is realised most cogently when applying these theories to the

phenomenon of change. These theories focused on the *processes* rather than the structures of organisations. Previous organisation theories had depicted the organisation as a relatively static structure. Change was driven by growth (Chandler, 1977; Greiner, 1972) and an organisation would simply move from one static form to another. Although Burns and Stalker (1961) and Lawrence and Lorsch (1967) posited a contingency framework where the static, bureaucratic form was just as valid as the organic, depending on the context, their work opened the way for organisation theory to examine dynamic processes within the organisation. It is at this point that it is possible to see a means of integrating theory, models and practise using the organic, informal systems and the dual process of continuity and change.

2.11 *A Review of the Literature on Conflict in the Meat Industry in New Zealand*

2.11.1 *Introduction*

It is useful to begin by referring to the New Zealand social science literature on the meat industry. A reading of this literature (see below) and drawing on my own research it is evident that there is a tangible industry-wide culture, or macro-culture in the meat industry. The meat industry is a "macho", tough sector which has been of enormous importance to the total economy of New Zealand. The nature of the work is dirty, unpleasant, monotonous and dangerous. Traditionally butchers, the "aristocracy" of the plant employees, are tough, uncompromising, skilled men who work hard and are prepared to confront management to achieve high wages. Management, many of whom had risen through the ranks of the butchers, were themselves tough and uncompromising, technically skilled but with little management knowledge or training (Inkson, 1979b). Many plants, developed in the days of a regulated, cost plus economy, were large and concerned primarily with killing and dressing as many sheep as possible. The meat industry was characterised by confrontational tactics on both sides but management tended to accede to confrontational tactics and pass on the costs to the New Zealand tax-payer.

The sequential nature of the process, perishability of the product during the process and the high strategic importance of the product, combined with a protected, cost plus management approach, provided labour with an opportunity to apply maximum leverage in order to gain better wages and conditions. Unions were well organised and were willing to take frequent and prolonged strike action to gain higher wages. Many plants had full time union officials, paid by the plants, as well as departmental delegates. Conflict levels in the meat industry were among the highest in New Zealand, with 61.5% of working days lost in the manufacturing sector in the period 1981 - 85 (Dept of Statistics, Summary of Statistics, 1986). Inkson reported that the meat industry "employs only three percent of the workforce but accounts for fifty percent of time lost through stoppages" (Inkson, 1980). As New Zealand's single most important export earner, the meat industry, with its high levels of conflict, came under surprisingly little scrutiny from social science researchers during the period 1950 - 1970.

2.11.2 *A Culture of Conflict*

However in 1976 Turkington (1976) offered a major review of the determinants of conflict in a study of the propensity to strike in three of New Zealand's most strike prone industries, one of which was the meat industry.

Using 23 variables, he arrived at the conclusion that objective factors such as size, location and ownership, were the chief determinants of conflict levels in the meat industry, while factors such as management and supervision were accorded low significance. Turkington concluded that large plants with overseas owners in an urban setting were more prone to conflict than others. In particular, Turkington found a positive correlation between size and number of stoppages - size explaining 51% of the variation in frequency of stoppages among the works. But there was no correlation when using man days lost per thousand workers.

The size factor in organisations has been "By far....the most widely researched anatomical factor.". But Porter et al (1975, p 248) warned that size is not as simple a variable as it may appear to be. Different studies have produced widely varying

reports on the correlation between size and various organisational attributes, for example the results reported by Woodward (1958, 1965) and Harvey (1968). A major problem with meta-analysis of studies on the effects of organisation size is that many studies use different categorisations of size, for example some may be working with sub-units of larger organisations while others are working with a whole organisation. (For a fuller treatment of the problems of research using the size variable see Damanpour, 1992.) However, notwithstanding the problems and the contradictions between some of the studies, the weight of opinion from meta-analysis (eg Porter et al, 1975) agrees that organisational size appears to have a positive relationship with absenteeism, turnover and labour disputes and a negative relationship with job satisfaction.

Turkington's findings appeared to support these conclusions but his study indicated that there were other possible variables contributing to the incidence of conflict. Turkington (1976, 112), in reference to the more impersonal relationship between managers and employees in larger plants, quotes the manager of a plant who maintained that - "bigger plants have more difficult industrial relations because communications are harder to control." and a smaller plant is referred to as a "happy little family" where problems are easily resolved. Turkington also cites personality differences as a cause of conflict. (p121). There were conflicting views reported for this, but on the whole respondents agreed that it was a contributor to conflict. Poorly trained supervisors were also perceived to be a problem contributing to conflict but there was a range of opinions as to why this was so. (p126).

These issues point to more profound, underlying social factors which could have contributed to levels of conflict, but these points are not examined except as further outcomes of the size factor. The study was across the whole industry, using aggregate figures and while the study did much to stimulate further research, its major failing was that Turkington has little to say in explanation of the marked inter-plant variation in conflict levels revealed, except to surmise that the variation must be caused by some interaction of the other factors.

Inkson (1980) examined the incidence of conflict in the industry and found that it is "characterised by massive differences in intensity between the plants." eg differences in the number of man days lost per year varies from 0.11 at one plant to 10.68 at another in the period 1967 - 73. Five out of 42 plants accounted for over 55% of the total lost time in the industry." Other negative indicators such as accident statistics and abuse of Accident Compensation show similar variance (see also Turkington, 44 - 46.) Therefore the view found to be widely held in the industry and reinforced by Turkington's study, that conflict is endemic and unavoidable does not appear to be valid in every case.

Other studies focused on the subjective, social/technical factors which predisposed the industry to conflict (Inkson & Cammock, 1988; Inkson, 1979b, Geare, 1972). Some of these factors were the production process and the nature of the work, the highly unpleasant environment of blood, entrails and death, noise, steam, water etc. The danger of sharp knives and need to concentrate on the boring work. Crowded working conditions caused by hygiene regulations needing more people. The Taylorist production line process with its repetitive, meaningless work was cited as contributing to stress which in turn lead to militancy.

Inkson (1977a) found that job satisfaction was "spectacularly low" amongst meat plant employees. Inkson felt that some conflict may be caused by alienation because of this but took a less deterministic stance when he found that workers are able to adapt their environment to reduce frustration through horse play etc. In another study, Inkson and Simpson (1975) found that most butchers define their employment in instrumental ways. They see it as a way of earning high wages with little intrinsic meaning. This instrumentalism is reinforced by strong union demands for more pay etc (Inkson, 1979a). There is also the aspect of seasonality which engenders little sense of loyalty. Many freezing workers were employed for only eight months each year and laid off until the start of the next killing season. Most were assured of re-employment at this time but the timing of the opening of the season was dependent on factors such as the weather and was not at all certain.

A further indication of the stressful nature of the work is provided by Geare (1972) who found that strikes peak seasonally around March/April when the butchers have made up any debts accrued during the off season and now have enough money. The frustration of the highly unpleasant work conditions builds to a point where it becomes unbearable - the "flashpoint". Geare maintains that the nature of the work at this stage is such that a "relatively minor incident" will trigger off a strike. He refers to Walker and Guest (1952) and says that the butchers' jobs are of the most monotonous sort because butchers cannot simply turn inwards to escape from the boredom. They have to pay attention because they are working with sharp knives. Although it may be true that the workers are compensated by the good money, the compensating power of the money wanes as the butchers have enough saved, bills paid up after the low income, off season. The monotony had not gone away, but simply built up because they needed the money. This leads to the seasonal strike patterns. Geare (1972) asserts that if people like butchers are made to work too close together they will become more aggressive. Geare (1972) recommends trying wider spacing. Instead spacing became even more crowded with the advent of new hygiene regulations to meet the requirements of the US market that required more butchers, but new technology on the chain meant that this problem was alleviated somewhat. Geare refers to the friction between technical workers and butchers because of the high relative pay of the latter (see also Turkington 107 - 110 1976). Geare specifically focuses on one of the plants in the present study and notes the bad relations between the engineer and production people.[1]

Geare (1972) also noted the negative effects on morale of the supervisors' tendency to ignore butchers' complaints. Geare (1972) concludes by saying that the responsibility for conflict lies with management.

As mentioned above, Turkington largely ignored the inter-plant variance in conflict. More detailed case studies of small groups of plants were carried out such as

[1] Interestingly, this negative relationship between technical and production people at all levels was witnessed over 10 years later when the present case study was carried out and this undoubtedly contributed to the problems they experienced with the new technology implementation process.

those by Inkson (1979b), and Howells et al (1968), who arrived at more powerful, alternative explanations for the inter-plant variance. These researchers suggest that, while objective factors such as size may well contribute to conflict, other factors may have a more significant or over-riding effect.

2.11.3 *Management Style.*

Turkington's (1976) finding that the chief determinants of conflict are objective factors, beyond the control of managers or employees and other views that the nature of work itself causes stress and conflict reinforce the kind of attitudes towards the incidence of strikes and other manifestations of disharmony and low job satisfaction often expressed by managers. Inkson (Inkson, 1979b) found that managers saw the industrial relations problems they faced as largely beyond their control and attributed them for instance to "pure bloody mindedness by the men". "The descent from this kind of baffled abrogation of responsibility, into managerial pessimism, fatalism and helpless inaction, is observable in some parts of the industry." This perception on the part of many managers that they are helpless in the face of powerful and intransigent unions has shaped the nature of their response strategies both at an individual plant and company level and at the industry level through the Meat Industry Association (MIA). The Labour Relations Act (1987) and to an even greater extent, the Employment Contracts Act (1991), provided managers with the opportunity to weaken the perceived power of the unions. Thus the problem of conflict in the industry was characterised as one of loss of control in the face of intransigent conditions and forces and not one of poor management training and skills.

Inkson reported (1979b) that managers had little or no management education and had a generally negative attitude towards the utility of such education. These managers attributed 75% of their industrial problems to "human and industrial relations" either with frontline workers - 50% - or supervisors - 25%. Managers tended to come up through the ranks and spent little time educating themselves but were strong on experience and technical expertise. Turkington (1976, 121) also cites

personality differences as a cause of conflict. There were conflicting views reported for this, but on the whole respondents agreed that it was a contributor to conflict, especially where there was a change of management in the shed and the union "tested" the new person.

Poorly trained supervisors are also perceived to be a problem contributing to conflict but there was a range of opinions as to why this was so. (Turkington, 1976; 126).

"As long as the freezing industry has continued to operate profitably, its traditional, insular managers and directors have seen no need for change. Little creative effort had yet been devoted to the long term solution of problems." In the regulated, cost plus world where the meat industry grew fat, there was little need to improve management skills or to address the long term problems. The high cost of this strategy was simply passed on to the tax payers of New Zealand.

Previous single and comparative case studies of New Zealand freezing works addressing worker attitudes, job satisfaction and levels of conflict show that management has a great deal to do with levels of industrial harmony.

Inkson & Simpson (1975) put forward a strong argument for management's quality and style as constituting a very significant factor in determining the levels of conflict at any one plant when he analysed the industrial relations record at two comparable plants. He later compared these findings with those from a third plant which reinforced the conclusions already drawn (Inkson, 197b). One of these plants had been the subject of separate intensive analysis for a number of years by different researchers. This plant had been characterised by one of the worst industrial relations records in the country when a new manager was brought in with a new approach and a mandate to use it. He implemented participative practices and training for supervisors and managers in facilitation skills and the results were reported to be little short of astounding. The levels of conflict dropped considerably. In addition butchers became less instrumental - the importance of cash being lower and that of relationships with peers and supervisors higher and had higher job satisfaction, now

finding the job less boring Researchers concluded that there was a direct causal relationship between the more considerate management style and the more positive outcomes. (Howells & Alexander, 1968; Ryman, 1979; Paske, 1979). Geare (1972) also concludes that the responsibility for conflict lies with management in his study of the causes of conflict in another plant.

However, Inkson (1979b) reminds us that managerial influence may be neither positive nor neutral and can have the opposite effect. Two case studies revealed that management often make a significant contribution to raising the level of conflict through their actions, even if it may be at times unwitting (Geare, 1972; Howells & Alexander, 1968).

Another industrial area which is prone to high levels of conflict is the construction industry, especially on large construction sites (Turkington, 1976). Cammock (1987), in a comparative case study of two large construction sites in New Zealand, Marsden Point and Motunui, analysed the reasons for the relative success of the site at Motunui. He found that the management took responsibility for the management of conflict and made a concerted effort to build trust through a process and empowering labour relations managers to make decisions quickly and fairly through delegation of authority and training. An open door policy was practised and lines of communication were kept free. Problems could be dealt with quickly and informally and close to the scene of occurrence. Well before construction began, union officials were taken to the USA and shown around a construction site there. They were able to talk to their counterparts in the construction unions there and given the opportunity to ask whatever they liked. On site, they were given as much information as they asked for as to the state of finances and progress and were treated with respect. The result was a relationship characterised by trust and openness so that there were few problems and the project was finished under budget and on time. Marsden Point, on the other hand was managed along traditional lines with all the attendant problems of conflict, low trust and lack of respect resulting in high

incidence of strikes, stoppages and inefficiencies. This project was finally completed millions of dollars over budget and over the required completion date.

In summary, previous research in New Zealand on the high levels of conflict in the export meat industry first details the predisposition of this industry towards conflict but then points to the style of management as a moderator of conflict in explaining the differential levels of conflict between similar plants. Specifically, research indicates that a considerate management style leads to lower levels of conflict and higher expressions of satisfaction among frontline workers in the ndustry.

Chapter 3

Research Design and Methods of Data Collection

3.1 *Overview*

This chapter discusses the research design and methods that were employed in this study to collect and analyse data. It begins with a discussion on how to study organisational change. A number of scholars have emphasised the importance of using qualitative methods to study change processes. The second section discusses the use of qualitative analysis in research. The third section explores various options within the qualitative research framework to study change and provides reasons for selecting the case study method. The fourth section describes the research sites, selection of participants for the study, techniques of data collection and analyses and the variables and measures used in the study.

3.2 *How to Study Organisational Change*

Sorge (1989 p23), in a conceptual paper, puts forward a framework which comments on the benefits to be derived in the study of change from:

> *"a synergy between organisation, industrial sociology and business administration research."* .

Sorge feels that such a synergistic approach should lead to the development of new theories and re-examination of existing theories in the respective fields. This belief in the benefits of a synergistic approach are echoed by Tushman and Nelson (1990).

Most of the theories of change in organisation theory and business policy are based on the concept of managers as rational decision makers and the phenomenon of change is viewed largely from a managerial perspective with various prescriptions

being offered for successful change management (Beer, 1990; Jick, 1993). Most of the writers recommend formulations of these recipes to ensure successful change. Usually included in the recipes are such items as consultation and participation as a means to lower or remove resistance to change and achieve a higher acceptance level. In general these prescriptions adhere to the view of managers as rational decision makers who need only follow the right rules for success.

Other writers have commented on the shortcomings of the rational model of change, suggesting that the process is instead, at least in part, incremental and unconscious (Quinn,1978; Mintzberg and Waters, 1985) and having an important temporal element which is essentially iterative and dynamic in nature (Mintzberg, 1978), making the process very much more complex and difficult to understand. These writers make the point that very little change is in fact discontinuous. Rather, major changes occur in a contextual stream of smaller decisions and changes and are affected by the internal and external contextual factors. More importantly, one of the major findings of this study is that the change process itself does not begin with the decision to change. The context in which the change is embedded is of primary importance (Kanter, 1983). All these factors point to the importance of understanding the informal processes and social dynamics that underlie the more formal outcomes in an organisation.

Previous studies of change management have also tended to remain closely within one academic field such as business policy (Pettigrew, 1987) or industrial sociology (Wilkinson, 1983). There have also been comparatively few studies which attempt to use case studies to examine the *process* of change management.

Recently, however, there has been a call for studies that use more comprehensive perspectives, both intra and multi- disciplinary and by the use of case studies (Tushman & Nelson 1990: Sorge 1989; McLoughlin & Clark 1988; Melin 1987; Johnson 1987; Pettigrew 1985). In the business policy area Pettigrew made a major contribution to our understanding of how a company goes about its day-to-day-management of change in his twelve year case study of ICI. He makes the point that:

> ***"There is a dearth of studies which can make statements about the how and why of change, about the processual dynamics of change....which go beyond the analysis of change and begin to theorise about changing." (p 15).***

Similarly, Johnson (1987), in his case study of a retail menswear chain in Britain, recommends the study of the process of change, not just the content, in order to gain a better understanding of the dynamics of change and to better take account of what actually happens to bring about change. He found the traditional approaches to change management simply were not sufficient either to describe or understand what he actually witnessed. Johnson found that in order to understand the processes of change he had to study the cultural/political beliefs and symbols of the company. Building on the work of Brown (1978) and Pfeffer (1981) he called this phenomenon the "paradigm" (Johnson 1987 Ch 8).

Melin (1987) draws attention to the assumptions underlying much research on strategic change processes and points out that the actual process is usually consigned to a "black box" and not examined at all (p 158). Most studies focus either on the causes or the effects of change, not the process. The probable reason for this is that, as Mintzberg and Waters' (1985) work suggests, the process is very difficult both to study and to understand.

To summarise, on-going research in the area of organisational change has called for the use of qualitative methods to study *processes* of change.

3.3 *Qualitative Research Design*

In the last ten years there has been a great deal of work carried out to advance the practice of qualitative methods. Miles and Huberman (1994 p.2) list examples of different approaches that have been developed that meaningfully address the problem of the analysis of qualitative data (Bernard 1988, Bogdan & Biklen 1992, Goetz & LeCompte 1984, Merriam 1988, Werner & Schoepfle, 1987a and 1987b). Qualitative research methodology in general and case study methodology in particular is an emerging research heuristic and frameworks for "good" research are only now being laid down.

However, Miles and Huberman (1994) emphasise that the field of qualitative research is still in development with researchers differing over various aspects of the research process. Miles and Huberman (1994), in the company of other seminal writers in this field, for example Yin (1988), Eisenhardt (1991, 1988), emphasise the need to develop more rigorous methodological techniques and they, and others, have gone some way towards achieving this.

Miles and Huberman (1994) assert that the important aspects are that "they focus on naturally occurring, ordinary events in natural settings." (p 10), that the data is grounded in the real context and is rich and holistic providing "thick" description. Miles and Huberman maintain that qualitative data "are a source of well grounded, rich description and explanations of processes in identifiable local contexts. With qualitative data one can preserve chronological flow, see precisely which events led to which consequences, and derive fruitful explanations." (p 1)

Miles and Huberman (1994) feel that one of the more important aspects of qualitative analysis to be in investigating causality (p 147). This is often a serious problem with quantitative analysis as, although one can establish significant relationships between variables, the directional flow of causality can be difficult to assess. Miles and Huberman (1994) assert that qualitative case study analysis' ability to deal with complex events, to allow a temporal dimension and to permit "retrospection", facilitates the elucidation of causal links. The researcher is able to move back and forth between variables and processes, revealing links between them. Such causal insights are strengthened if they can be further tested in multiple case study designs through the process of analytic induction. (Manning, 1982; Miller, 1982). Neither an experimental nor a survey method can satisfactorily encompass the full set of variables impinging on any given dynamic social process, such as that involved in the management of change within an organisation.

The authors go on to say that data collected over a sustained period facilitates the examination of processes and causality. The qualitative approach ensures data is "not reduced immediately to numbers, but kept in unstructured form" and "Offers vivid understanding of accounts, experiences [and] access to the chronological & social context." Further, "Theory is derived from & grounded in the data [with] ongoing development of conceptual relations and theories."(Richards, 1991).

Within the qualitative research framework, there are a variety of choices such as the case study method, grounded theory approach, ethnography and so on. Two choices which were considered were: grounded theory and the case study approach.

3.4 *The Grounded Theory Approach*

Grounded theory is the name of a type of qualitative research which was coined by Glaser and Strauss in 1967. The methodology has since been considerably refined (Strauss and Corbin, 1990) and is now a rigorous technique with distinctive characteristics and approach. Strauss and Corbin maintain that grounded theory can only be carried out through the use of the data gathering and interpreting technique they describe. However the distinguishing feature of grounded theory as explicated by Glaser and Strauss in 1967 was not the technique, which at that time was not formulated in the exact way in which it was later, but rather the product of the research. This product is "theory suited to its supposed uses" (Glaser & Strauss, 1967, p3). This species of theory is distinguished in particular from theory "generated by logical deduction from *a priori* assumptions." (ibid p3). To express this differently, Glaser and Strauss maintain that grounded theory is a technique for generating theory from the data as opposed to testing theories. The advantage of such a theory generated by and emerging from the data is that it should be immediately verifiable by a layperson involved in the area under study as well as being recognisable by other social scientists. The theory emerging from the data will "fit" the data in a way which theories derived through "logico-deductive theorising" cannot do. A major premise of grounded theory is that there should be an absence of prior assumptions by the researcher as he or she enters the site to be studied. The aim is to generate new theory, grounded in the data, which explains the social phenomena observed.

This research is not Grounded Theory as set out by Corbin and Strauss (1990). The exacting and rigorous method was not used - indeed I did not even know of it

when I started. I did have prior assumptions about what I might find, based on theoretical ideas and models in the literature. In terms of Glaser and Strauss's method, I was simply testing theory and *a priori* assumptions. However I found that these prior assumptions and models were inadequate to explain the differences in outcomes I found at different plants. I had to generate theory in order to explain what the data was actually saying. This theory was grounded in and emerged from the data I gathered. I was able to develop and test the theory in successive visits to the sites to verify if indeed the emerging ideas "fitted" the data and made sense to the people at the sites. This was a process of analytic induction and it is this process which is central to the practise of grounded theory. Therefore it could be maintained that this research is "grounded theory" of a generic type while Grounded Theory as explicated by Corbin and Strauss (1990) is but a particular type.

I would also like to address the issue of *a priori* thinking, the absence of which Glaser and Strauss (1967) and Strauss and Corbin (1990) maintain is essential to theory building. Miles and Huberman (1994, p 18), in discussing theory building, assert that "Any researcher, no matter how inductive in approach, knows which bins [2]are likely to play in the study and what is likely to be in them. Bins come from theory and experience and (often) from the general objectives of the study envisioned." It is surely impossible for any social scientist to clear their mind and enter a research situation with their thinking unaffected by prior knowledge and experience. Indeed, the very choice of subject and site presupposes prior conceptualisation at the very least. I cannot see that it is useful to make such a vehement distinction between theory testing and theory building, which implies that

[2] "Bins" here refers to general constructs and categories.

they are qualitatively different. If we consider research which sets out to test prior assumptions but which has to form new assumptions as a result of the failure of the data to uphold the original concepts, then it is possible that any such distinctions become less clear cut. Inductive approaches are quite compatible with theory testing and these possess the advantage of not only having the possibility of generating new theory but also of qualifying and amending extant theory.

3.5 *The Case study Method*

Yin defined a case study: as:

> *"an empirical enquiry that:- investigates a contemporary phenomenon within its real life context; when- the boundaries between phenomenon and context are not clearly evident and in which- multiple sources of evidence are used."* (Yin, 1989, p 23).

The above definition not only delineates the meaning of "case study" but also implicitly defines when a case study would be an effective choice. This study satisfies all the above criteria in that ongoing events are examined in their real context in order to explicate the social processes, the study is sustained over eighteen months and data from different sources are used. It is this desire to investigate the full context that makes the case study the most suitable methodology when the subject of enquiry is social processes within an organisation. "In brief, the case study allows an investigation to retain the holistic and meaningful characteristics of real life events - such as ....organisational and managerial processes" (Yin, 1989, p 14).

3.6 *Methodological Issues in Case Study Research*

Many criticisms of qualitative research methodology in general and case studies in particular have been levelled by both devotees of the more established, quantitative methods of enquiry and qualitative researchers.

The potential for inaccuracy in case study research is high with data gathering, processing and at the stage of the drawing of conclusions. Miles and Huberman (1994) give an excellent account of these pitfalls and tactics to overcome them. Chief among these pitfalls are the areas of subjectivity and researcher bias. For example, when the focus of the study is a whole unit then "good" research must ensure that the respondents are not non-representative. This inaccuracy can arise from an over-reliance on respondents who are easily accessible or picked for the researcher by someone else. A second source of inaccuracy may arise from the researcher's non-continuous presence at the case. This may encourage the researcher to generalise from non-representative occurrences or to put too much weight on dramatic events. The researcher must ensure that the research strategy is structured in such a way as to minimise these potential sources of error while at the same time preserving the essential features of the case study method which make it such a rich source of new data and potential for theory building and testing. A good design is a dynamic balance between achieving reliability and validity without destroying the delicate nature of case study research's relationship with respondents. Methodological rigour should not be allowed to extinguish the very features of qualitative research which make it so valuable as a tool for examining the richness of social interaction.

Implicit in Miles & Huberman's (1994) work is the notion that qualitative research, in its essence, is a methodology which employs ""casting about", experimentation, dialogue and learning" (Miles & Huberman, 3). The search for

rigour is driven by the need to enhance this essential characteristic of qualitative research rather than restricting its process so that it can be qualified to rank as some kind of quasi-quantitative method. It is impossible to eliminate all sources of error in any research design but it is possible to minimise them to the degree that we can place some confidence in the reliability of the conclusions drawn from the data. To this end we constructed a design we felt met this criterion.

3.7 *Multiple Case Studies*

Single case studies have been used for some time, for example, Whyte's (1943) "Street Corner Society", a descriptive study and Allison's (1971) explanatory study of decision making during the Cuban missile crisis. Eisenhardt gives examples of the single case study used to test theory (Pinfield, 1986; Anderson, 1983) or generate theory (Gersick,1988; Harris and Sutton, 1986).

Yin (1989) and Strauss & Corbin (1990) briefly discuss multiple case studies and Eisenhardt (1989) writes in detail about the theory building attributes of multiple case studies. She asserts that the multiple case design allows the researcher to study patterns between cases and theory and to avoid chance associations (Eisenhardt, 1991). Miles and Huberman (1994, p 26) confidently assert that multiple case studies "offer the researcher an even deeper understanding of processes and outcomes of cases, the chance to test (not just develop) hypotheses, and a good picture of locally grounded causality.

Yin (1991) refers to "replication strategies" when discussing multiple case study methods. We can compare and contrast findings in one case with those in other cases thereby improving the validity and robustness of our conclusions.

3.8 *Research Sites*

We selected four plants for study, in two matched sets of large vs small plants. This allowed us to minimise the risk of causal relationships being confused by intervening variables such as size. This also facilitated testing of concepts and ideas through replication. In practice this process led to some of the more powerful mechanisms for idea generation and discovery. For example if a series of actions appeared to lead to a certain outcome at plant A, the discovery that the same actions led to a different outcome at plant B stimulated deeper investigation to find out why. Four meat works form the main source of data. Two of the meat works were situated in the North Island and two in the South Island. These are paired into two sets of one large and one small plant owned by two companies, each of which has a head office remote from the works (Fig 3.1).

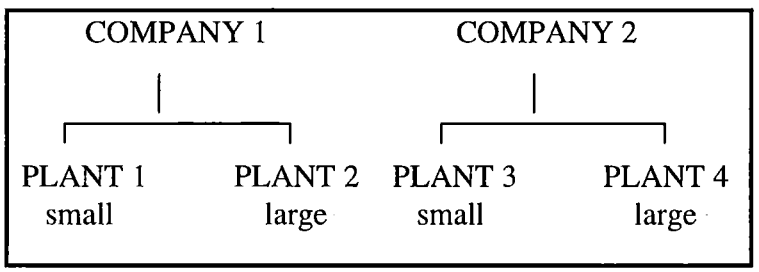


Figure 3.1 Plants in study by size and company.

3.9 *Issues of Access and Confidentiality*

The problem of gaining access for this kind of intensive case study based project was a major concern and was assigned a high priority at the outset[3]. Many companies are understandably reluctant to allow this kind of research, especially when undergoing major change. This was particularly so in the meat industry where a high

[3]An interesting account of the problems of access is given in Crompton & Jones (1988).

degree of competition was developing between companies. I was warned by industry experts that I would have a great deal of trouble in gaining access to plants. Indeed the first company I contacted would not even allow me to enter one of their plants to talk to the General Manager as part of the original scoping exercise.

A strategy was developed to minimise potential problems of access and to ensure triangulation of the data. It involved gaining the backing of the Meat Producers

Institution	Date of interview
NZ Council of Trade Unions	National President 24.1.90 Economist 24.1.90
Auckland and Tomoana Freezing Workers Union.	National Secretary 5.7.90, 7.2.91 Regional Secretary 26.11.90
Meat Producers Board	President 24.1.90
NZ Meat & Wool Board Economic Service	Chrisctchurch Adviser 30.3.90 Wellington Adviser 25.1.90
Lincoln University	Prof Tony Zwart - Agricultural Economics 19.4.90
Meat Industry Research in New Zealand	Chief Design Engineer 3.7.90; 27.11.90; 14.2.92 2 Design Engineers 3.7.90

Table 3.1 Preliminary interviews for pre-fieldwork scoping exercise

Board, the Meat Industry Research Institute (MIRINZ), the Council of Trade Unions (NZCTU) and the meat industry unions who were originally involved in a pilot study carried out by the Social Science Unit of the DSIR (Meat Industry Study, 1988) (see Table 3.1)

Another problem was that the potential field of companies from which I could choose was limited in that there were few companies that were introducing this new

technology at the time. I eventually managed to find a plant undergoing the change which allowed me to talk to the General Manager "for fifteen minutes only." This initial contact at Plant A developed into an interview lasting over an hour. I outlined what I wanted to do and I left with the promise that I could access the plant for the purposes of the study if I could gain the permission of their Head Office. I contacted the CEO at Head Office, telling him that the General Manager of Plant A was happy to accommodate the research and he then gave his blessing. I then approached another plant, Plant B, from the same company, using the qualified acceptance from Plant A and the CEO's approval as my opening and gained the same permission.

The initial support of the Meat Producers' board was vital here in helping me to establish a case with the Head Office of Plants 2 and 4 for the viability of the study. There were some concerns expressed about confidentiality of production data and details of installation. I satisfied these by assuring the CEO and the Plant General Managers that no names, either of plants or personnel would be used and that any quantitative data gathered would be expressed as ratio changes except where the data was already known outside the company through their own marketing and publicity. The managers also felt that the results of independent research would be useful to themselves.

A similar "snowballing" technique was used with the unions involved. The initial interview with NZCTU President and economist helped to gain access to the meat workers' union Head Office staff and subsequently regional and plant officials.

Once I had gained access to the first two plants, it proved easier to repeat the exercise with another company for plants 1 and 3. Both the project and myself had gathered credibility through the process of "snowballing". This effect gathered force

as it moved forward, acceptance by respected figures and peers permitting people to view the project as a respectable, ongoing entity that was actually developing, rather than just a speculative notion.

Both the management at each of the plants and the unions were happy to take part in this study as they perceived that the potential benefits outweighed the inconvenience.

Confidentiality was an issue of great concern to participants in the study at all levels. As mentioned above, I gave assurances in writing that only ratio figures to indicate changes in performance data would be used and critical production or other data would not be overtly presented in the final report. Any conclusions I drew from the data were verified through discussion with the relevant personnel.

The other issue of confidentiality concerned internal processes within each plant. It was important to assure interviewees that data divulged to me would not be transmitted to other people within the plant. This was particularly crucial when the data concerned matters that were in contention between unions and management over the new technology implementation. This issue of trust was of paramount importance. If the interviewee had doubts as to my integrity, the quality of their data in terms of revealing underlying social processes, perceptions and constructions would have been in doubt.

There were several occasions when I found myself in the unenviable position of being asked my advice about some issue in contention by one party, when I had full knowledge of the other party's thoughts and plans on the matter. I maintained a strict policy of impartiality and managed to avoid compromising data given to me by any interviewee.

I found in practice that once I was accepted and trusted, interviewees were usually open and sometimes incredibly candid - even where, as happened with a few, they were initially hostile and suspicious.

3.10 *Data Collection Methods*

Interview data were collected in a variety of ways. Primary data were gathered through interview on an individual and small group basis at different levels of the organisation. These were with senior, middle and front line management and with process and maintenance workers. Other stakeholders were also interviewed, eg, union officials, industry associations. The small group interviews were usually unplanned and opportunistic in that I would seize any opportunity that presented itself to talk to employees in the plants. For example, I would go into the "smoko room" to eat lunch and pick a table at random and ask if I could join whoever was there. A lively debate would quickly spring up during which I could test out my latest ideas and verify data from other interviews. I found that most of the butchers and labourers were very happy to talk. In fact I was approached anxiously by some who wanted to make sure I didn't miss them.

At first, I tried to record interviews but this proved to be too intrusive with many of the interviewees. Instead I wrote down key points - I became a very fast writer with my own short hand for often-occurring phrases and jargon - and would write these up fully on a lap top computer on the same day. This proved to be very successful. I needed the minimum of equipment which meant that, in addition to the pre-arranged interviews held in specific rooms, I could roam around with my notebook, interviewing people wherever I found something or someone of interest. I

found that after a few days I would become familiar to personnel and accepted as having a legitimate role to play.

I was able to preserve the exact phraseology used in interviews and I found that typing the data straight into the laptop on the same day allowed me to review what I had done, identify gaps in the data, come up with preliminary hypotheses, grounded in the data, which could be immediately tested out with the next interviews. This process of continuously forming and testing hypotheses through feed back to plant personnel served to both test causality and to validate (or not) hypotheses. The process was strengthened through triangulation (Jick, 1979) as data and hypotheses were tested against alternative sources of data. This could be carried out on a daily basis as hypotheses were formulated after each day's collation of data but was more commonly carried out between plant visits. After a round of visits data was processed and preliminary hypotheses were formulated. These were discussed with supervisors and colleagues, checked against alternative sources of data, for example written records, and tested on the next visits.

Most interviews were one on one, semi structured in format. The initial structure of interviews was derived from the theoretical framework. (See Table 3.2 for Interview Schedule). However, interviewees were encouraged to be as open as they liked and to move into areas that either I or they felt were relevant and were not covered by the original set of questions. To facilitate this process I would spend some time at the beginning of the interview relaxing the interviewee, breaking the ice and establishing trust by chatting about non threatening issues, assuring confidentiality and

at the same time getting some idea of their experience, length of service etc. I would also allow them to question me about the orientation of the study - who was it for, was I working for management or the union and so on. In this way I established my status as an independent researcher. Repeat interviews with respondents on follow-up trips were much easier in that they knew me and we could begin by reviewing what we had talked about previously, both to verify that what I had recorded was correct and to explore further avenues suggested by previous comments when weighed against the concepts that flowed from the data from other respondents.

Staff interviewed in the plants			
Plant 1	**Plant 2**	**Plant 3**	**Plant 4**
Former General Manager General Manager Asst Mgr Chief Engineer Second Engineer 2 Fitters Casings Dept Foreman Production Manager Asst Production Mgr Employee Relations Mgr Safety and Training Officer Slaughterboard Supervisor Boning Room Supervisor Packing Room Supervisor Chain Supervisor Chamber Supervisor Butchers delegate Boners delegate 20 Butchers 10 Labourers] Plant Union President Plant Union Secretary Boner MAF Inspector	CEO General Manager Production Manager Chief Engineer Personnel Manager EDP Supervisor MSH Supervisor MSH Asst Supervisor Boning Room Supervisor Freezer Supervisor Plant Union President Plant Union Secretary Regional Union President Reg Union organiser 2 MAF Inspectors Butchers delegate Labourers delegate18 Butchers 10 Labourer 2 Boners 2 Packers 2 Fitters	General Manager Asst Mgr Production Manager Personnel Mgr MSH Snr Supervisor 4 Chain Supervisors Visiting chain spvsr 21 Butchers 12 Labourers FWU Local President FWU Local Vice President FWU Local Secretary Butchers Delegate Chief Engineer Second Engineer Draughtsman Project Engineer Chief Electrician Foreman Fitter Leading Hand Fitter 2 Subforemen - lamb cuts (boners) 2 Lamb Cutters (Boners) Union delegate - lamb cuts Fell Monger MAF Inspector	CEO General Manager Group Industrial Officer Industrial Officer Plant Manager Asst Plant Manager 2 MSH Snr Supervisors 5 MSH Supervisors Chief Engineer Second Engineer Supervisor Fitter 3 Maintenance Fitters Electrician MAF Senior Inspector Asst Industrial Officer Industrial Engineering Manager 3 Industrial Engineers Local Union President Local Union Secretary 2 Butchers Delegate Asst Butchers Delegate Training Supervisor 20 Butchers 13 Labourers Asst Supervisor - Stockyard Customer Services Co-ordinator FW Clerical Union Delegate

Table 3.2 Interview schedule

These interviews were initially arranged through negotiation with either the Plant General Manager or another senior manager and the supervisor of the department concerned. I was concerned that this would result in my interviewing only employees deemed by management to have the "right" attitude. However, the managers consistently instructed supervisors to allow me the freedom to interview whoever I liked and not to select people with the "right" attitude. In practice I found that once I had established a working relationship with personnel in the plant, I could talk to whoever I liked. Most of the time, managers were very accommodating, rescheduling (rebalancing in the industry jargon) the manning so that I could speak to people from different parts of the processing chain. A room was provided for the interviews to take place that was free of interruption. I was provided with the necessary hygiene apparel, white gum boots, white hard hat and white dust coat, so that I could move around freely inside the processing area.

Before entering the plants, I was careful to ensure that the freezing workers' union officials knew what I was doing and what my motivation was. I interviewed the freezing workers' regional union executive staff and obtained their blessing before entering the plants and they notified the local and plant union officials that I was going into the plants to conduct research. They in turn let their members know in the plants. I found that following this protocol was greatly appreciated. I was viewed by all sides, for the most part, as someone who respected their position and did not take their assistance for granted.

I also interviewed people as opportunities presented themselves. For example, I found an electrician, not on the interview schedule, monitoring the chain after a

breakdown and spoke with him about his job, the technology and his experience. This provided some interesting and important insights.

Similarly, I conducted very informal interviews both one on one and with groups in the smoko rooms of both supervisors, managers and butchers at tea breaks and lunch times. Again these were unscheduled and informal but also provided important data.

Observation of the work processes themselves provided further primary data. Viewing the interaction between the freezing workers and between them and their supervisors and engineering staff provided valuable data and facilitated greater understanding of data derived from interviews. Experiencing the actual conditions of the slaughter house, the blood, the noise, steam and gleaming stainless steel, all provided an extra dimension to the data gathered by interview as well as forming part of the data itself.

Sitting in on management meetings allowed me to experience the nature of the relationships, attitudes towards each other, subordinates and perceptions of and approaches to problems. Similarly, I sat in on meetings of the union executive as they reviewed progress and made plans. These experiences added to my understanding of the complex mosaic of interpersonal relationships, power balances and mind-set.

The interview techniques used were designed to allow maximum flexibility and to make sure we did not only access those whom management wished us to or those articulate individuals who form a "local elite" (Dean, Eichorn and Dean, 1967). A temporal element was provided in two ways: first from the collection of primary and secondary data from the past, going back up to five years and second by spreading the interviews over several visits over two years (Table 3.3). This lent a degree of

longitudinality to the study which was an important aspect of coming to an understanding of the process of change and is a further aspect of triangulation.

	Plant 1	Plant 2	Plant 3	Plant 4
Scoping visit	9.8.90	5.7.90	9.8.90	10.8 90
1st plant visit	10.12.90 - 14.12.90	26.11.90 - 30.11.90	17.12.90	3.12.90 - 7.12.90
2nd plant visit	17.2.91 - 21.2.91	3.2.91 - 7.2.91	24.2.91 - 28.2.91	10.2.92 - 14.2.92
3rd plant visit	24.2.92 - 27.2.92	11.2.92 - 14.2.92	2.3.92 - 5.3.93	9.5.91 - 10.5.91
4 th Plant visit				18.2.92 - 21.2.92

Table 3.3 Timeline of Plant Visits

Each plant was visited at least three times, for a week at a time each, and this allowed us to check out concepts and ideas as they emerged and verify their reality with respondents. These emerging concepts were also exposed to rigorous debate with supervisors and colleagues. Nascent conclusions were questioned and alternative explanations sought. Using these strategies, I attempted to minimise potential problems with subjective bias.

Secondary data was collected from company and union records, industry statistics and histories and from government statistics.

3.11 *Coding and Analysis of Data*

Qualitative data were analysed using content analysis. This was achieved using a combination of initial, manual -"eye-balling" analysis, and peer review, supported and validated using a new "software system for managing and organising and supporting research in "qualitative data analysis" projects."(Richards et al, 1992 p2). This system is called NUDIST - an acronym for "Non-numerical Unstructured

Data Indexing, Searching and Theorising" developed at La Trobe University for interactive, qualitative data analysis. NUDIST allows manipulation of large amounts of qualitative interview data into categories through coding by any key words or phrases.

The use of NUDIST for analysis of data requires that the data is first manually coded in accordance with a scheme based on concepts generated by the data. The raw interview data was first coded following the theoretical logic emerging from the preliminary analysis of the data through discussion with colleagues. An iterative process of checking coding with a panel of students and refining categories took place. This was carried out in order to verify that my interpretations of the raw data were not simply subjectively biased. Six post graduate students were given randomly selected and uncoded pages of interview data. They were also given a set of constructs and asked to code the data using these constructs. We found an 86.3% correspondence between their coding and my own. The main problem was caused by confusion and overlap between constructs for different types of management style and behaviour. These constructs were amended and the group of students were used to code a further random selection of interview data. This time there was a 94.6% correspondence which was felt to be close enough.

3.12 *Variables and Measures Used in the Study*

When the data was encoded and run through the Nudist analytical programme, the analysis produced sets of data in various categories. From these initial categories I built more specific categories such as "empowerment" and "ownership", each of which had a corresponding contrasting category such as "disempowerment" and

"alienation". Nudist places each of these categories in separate nodes and gives frequencies of occurrence for each one. In this way I could quickly test out explanations. Links between the categories for each plant could also be assessed through perusal of the surrounding data where each occurrence of a code appeared.

3.13 *Explanation of the Constructs*

Before examining the constructs in more detail it is important to explain the meaning of the frequency table as displayed in Table 3.4. The table shows the actual frequencies of each factor and the percentage which this makes up of all coded statements in the data. These statistics are not intended to demonstrate any statistical significance - other than to highlight the differences between plants and to underline the theories about the plants as they were developed.

3.13.1. *Empowerment / Disempowerment*

Of all the constructs used here perhaps the most controversial, and therefore most in need of explanation, is "Empowerment". The construct "Empowerment" was composed of the concept categories of ***delegation, consultation*** and ***training*** (see Table 1). The term "empowerment" as used and defined here is a convenient title for this particular construct which attempts to capture the essential elements of the concepts grouped therein. The underlying motif is one of people working together who are well trained, feel free to make decisions and take action without direction from a higher authority and where a high degree of consultation takes place as a matter of course. This definition and interpretation is not intended to contribute to the debate on empowerment, however it is necessary to place this use of the term empowerment in its theoretical context to avoid confusion.

The literature is united in lauding the efficacy of empowerment in terms of organisational outcomes such as efficiency and performance (Bennis & Nanus, 1985; Kanter, 1983; McClelland, 1975). While there does not appear to be any closely described and agreed definition of the term empowerment extant in the literature, most authors agree either that empowerment involves giving power to employees through such means as delegation or alternatively, employees perceiving that they have power or are empowered.

The first notion, that of empowerment through delegation, consultation and so on arises from the management literature (Kanter, 1983; Burke, 1986; Block, 1987). This treatment of the notion of empowerment sees the degree of empowerment as contingent on certain variables such as consultation, delegation and training and often manifests in programmes such as management by objectives and quality circles. In other words, the degree of empowerment depends on the degree of delegation and so on.

The alternative view arises within the psychological literature where authors assert that the degree of empowerment is more a function of the perceptions of the actors involved (for example Conger & Kanungo, 1988; Thomas & Velthouse, 1990; Spreitzer, 1995, 1996).

This view holds that the success of making resources available for employees or delegating responsibilities to them is dependent on interpretive, cognitive processes and perceptions of their own abilities and possible consequences of such action. Conger and Kanungo (1988) state that these views stem from the definition of empowerment as "enabling" rather than from "delegating" and are based on notions of self efficacy (Bandura, 1986). For Thomas and Velthouse (1990), empowerment is

comprised of four cognitions, meaning, competence, self determination and impact and assert that because of this, the social dynamics of the workplace may have a major influence on how empowered people actually perceive themselves to be in any situation, independent of the management techniques involved that are designed to increase empowerment.

While the question of empowerment is not the subject of this research, the data appears to conform more with the interpretive-cognitive definition than the structural one. All the plants had consultative processes set up but it was only at Plant 1 that they appeared to work in the sense of motivating employees to go beyond their strict job description and expectation. The high number of occurrences for all the empowerment categories (see Table 3.4) is an indication that employees perceived themselves to be consulted and empowered. For most employees at the other plants, consultation and delegation was perceived to be low. Plants 2, 3 and 4 had comparatively low scores on the Empowerment measures, while Plant 3 and 4 had comparatively high scores on the Disempowerment measures. The Disempowerment construct was composed of directly expressed feelings of powerlessness, evidence of being ordered to carry out tasks, of being "informed" as a surrogate for consultation and of poor training in the new processes and in their work generally. A combination of these factors left employees at all levels feeling helpless and disinclined to volunteer information or helpful suggestions or to go beyond the carrying out of prescribed roles and actions. It needs to be emphasised here that at none of the plants was there any formal and overt attempt by management to introduce a defined, structured empowerment programme. At no time did any person use the term

"empowerment" in my hearing. My arrival at the use of this term is purely through a process of deductive inference and is logically consistent with the data.

One last point on empowerment. The data gathered for this study could well, if the data were recoded and reanalysed, provide potentially powerful empirical material for a study on empowerment as a contribution to the emerging literature on this topic.

Frequency of Occurrence of Constructs				
POSITIVE FACTORS				
CONSTRUCT	**Plant 1**	**Plant 2**	**Plant 3**	**Plant 4**
1. Empowerment				
delegation	35 - 3.97%	4 - 0.47%	7 - 0.55%	9 - 0.89%
consultation	35 - 3.97%	6 - 0.70%	7 - 0.55%	12 - 1.19%
training	20 - 2.27%	8 - 0.94%	5 - 0.39%	2 - 0.20%
2. Ownership				
"our plant"	45 - 5.1%	6 - 0.70%	3 - 0.24%	1 - 0.10%
"one team"	64 - 7.2%	7 - 1.06%	4 - 0.31%	3 - 0.30%
"home"	5 - 0.57%	1 - .12%	2 - 0.16%	NIL
pride in plant	15 - 1.70%	9 - 1.1%	7 - 0.55%	3 - 0.30%
3. Integration				
informal communications	72 - 8.1%	32 - 3.76%	14 - 1.10%	14 - 1.39%
Informal problem solving	29 - 3.29%	17 - 2.00%	4 - 0.31%	8 - 0.79%
facilitation	10 - 1.13%	NIL	1 - 0.08%	2 - 0.20%
4. Trust				
(Employees)				
trust in managers	38 - 4.31%	1 - 0.12%	5 - 0.39%	2 - 0.20%
confidence in managers	24 - 2.72%	10 - 1.17%	8 - 0.63%	7 - 0.70
(Managers)				
trust in employees	9 - 1.02%	2 - 0.12%	NIL	3 - 0.30%
confidence in employees	10 - 1.13%	2 - 0.23%	2 - 0.16%	2 - 0.20
appreciation of employees	1 - 0.11%	NIL	4 - 0.31%	NIL
NEGATIVE FACTORS				
5. Disempowerment				
powerlessness	NIL	NIL	24 - 1.88%	12 - 1.19%
ordering	3 - 0.34%	10 - 1.17%	30 - 2.35%	26 - 2.58%
informing	2 - 0.23%	1 - 0.12%	20 - 1.57%	10 - 0.99%
lack of training	2 - 0.23%	5 - 0.59%	12 - 0.94%	11 - 1.09%
6. Alienation				
them and us	6 - 0.68%	27 - 3.17%	28 - 2.20%	63 - 6.26%
lack of pride	NIL	1 - 0.12%	6 - 0.47%	3 - 0.30%
7. Control				
formal communications	8 - 0.94%	1 - 0.12%	26 - 2.04%	21 - 2.09%
formal problem solving	7 - 0.79%	2 - 0.23%	25 - 1.96%	18 - 1.79%
8 Mistrust				
(Employees)				
mistrust of managers	4 - 0.45%	14 - 1.64%	57 - 4.47%	40 - 3.97%
no confidence in managers	5- 0.57%	10 - 1.17%	50 - 3.92%	41 - 4.07%
(Managers)				
no appreciation of employees	NIL	11 - 1.29%	17 - 1.33%	3 - 0.25%
no confidence in employees	NIL	12 - 1.41%	18 - 1.41%	11 - 1.09%
mistrust employees	NIL	5- 0.59%	9 - 0.71%	15 1.49%-

Table 3.4 Frequency of Occurrence of Constructs

3.13.2. *Ownership / Alienation*

There were many expressions from the staff at Plant 1 which portrayed their feelings of ownership of the plant. Staff at all levels commonly referred to their work place as "our plant" and used terms which were consistent with their seeing it as "home".

There was also much use of language which expressed the notion that they were all one team.

At Plant 1 this applied to all the staff. Staff at other plants would talk about their teams but they were more commonly referring to the particular group among whom they worked and at the same level as themselves. Thus at Plant 4 there was a very strong team feeling both among the frontline chain employees and among senior managers but these were different teams. At Plant 1 the unified team feeling contributed greatly to the positive social context and the overall success of the change process, whereas at Plant 4 the strong, differentiated team feelings helped to reinforce the negative social context. The frontline employees on the chain had a strong anti-management stance which was sustained and managed by the butchers' delegate who worked from a platform of the established history and culture of conflict and suspicion.

3.13.3. *Integration / Control*

Integration is a construct designed to reflect the differences between the manner in which ongoing processes were managed in the different plants. The data indicated that the smaller plants had much higher levels of informal communication and problem solving than the larger plants. But there was also a marked difference between the two smaller plants with Plant 1 displaying a much higher frequency of

both informal communications and problem solving than Plant 2. While there was evidence of informal processes at Plants 3 and 4, the frequency was much lower, while the frequency of formal communications and problem solving at these plants was markedly higher than Plants 1 and 2. This is to be expected in larger organisations (Porter et al, 1975) but the differences in occurrence of informal processes and the fact that all plants had similar formal systems, albeit of different scales, and the evidence gained from observation of the actual processes and interviews with personnel at the plants, suggests that the higher levels of informal processes at Plant 1 and the relatively lower levels at Plant 2 are the result of conscious choice on the part of the managers involved.

That these informal processes directly contributed to the success of Plant 1 was demonstrated on many occasions where I saw problems being detected, worked through and solved very quickly with all affected personnel working together in a relatively ad hoc manner. In contrast, similar problems at the other plants were dealt with through formal channels. In many instances, the very people who could have contributed a great deal to the solution of a problem, the butchers, were excluded both by the formal system and their own alienation from the process.

The positive informal systems observed in the plants, particularly Plant 1, which served to facilitate efficient processes of change and adaptation, were closest to the organic processes described by Burns and Stalker (1961). However, unlike Burns and Stalker's processes, these informal systems were not "designed" by the managers. Rather, the processes evolved to suit the particular requirements of the situation, taking into account the nature of the task, the kinds of people involved and their relationships and attitudes towards each other and to the organisation to which they

belonged. In other words, Integration refers to the ability to spontaneously work together as a team, whereas Control relates to using hierarchy to solve the problems.

3.13.4. *Trust / Mistrust*

In Chapter 2 I explored the role of trust in an organisation and found that trust has been characterised as the glue that holds the informal processes together (Gambetta, 1988). Trust may also be characterised as the building block of the positive context. Although all the four contextual elements are to some degree interdependent and cyclically reinforcing, the data suggests that the presence of trust is essential for empowerment and integration to evolve. It is this element that facilitates the development of effective informal processes, delegation and consultation.

As with the other elements, there are marked differences in frequency between Plant 1 and the other plants for both the positive, trust, element and for the negative, lack of trust, element. This is also reflected in the differences between the views and feelings of employees for managers and of managers for employees.

3.14. *Comparison of the Plants*

At the outset of this study the intention was to compare all the plants with each other in their size pairings. It would have been possible to compare the small plants, Plant 1 with Plant 2 and the large plants, Plant 3 with Plant 4, as well as comparing large with small. In the final analysis, I decided that Plant 1 was clearly very different from all the other plants and that this plant most clearly demonstrated the characteristics of the model explicated from the data. For this reason I chose to compare Plant 1 with the other three plants.

Chapter 4

Measures of Success

4.1 *Introduction*

There was a clear differentiation between the four plants as to the degree of success with which they introduced the new technology. Figure 4.1 shows that the smaller plants performed better in terms of payback times than the larger plants but there were clear differences within the size grouping. The full tables for calculating these payback times may be seen at Appendix 1.

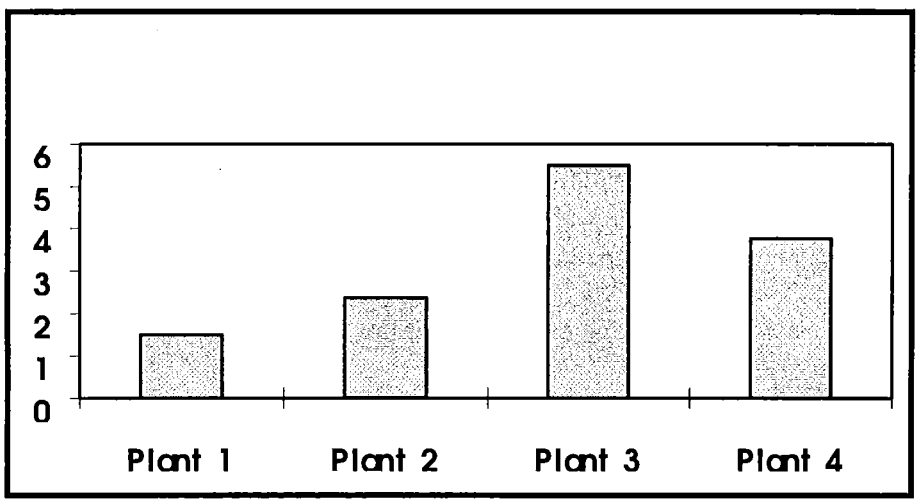


Figure 4.1 Payback times in years.

Both the measures of success and the ranking developed from these measures were unknown to me at the outset of the case studies. It was not until the second visit that the picture of how to measure success emerged. Essentially I went into each plant "blind" - I did not know which were more or less successful. As part of the original scoping exercise I interviewed the General Managers at each plant. None of them reported any major problems - in fact, for the most part they represented the change as proceeding well, albeit with some hiccups along the way. In each case the new technology was in use or in the process of trialling on a daily basis and to that extent

was successful. What the measures of success achieve is to assess the relative success in comparison with the other plants. The measures also demonstrate that manager's estimates of payback times were at best somewhat optimistic. Payback time criteria were used in all plants as both the measure of success and as the main original justification for adopting the new technology yet managers at different levels within each plant would cite different payback times. For example at Plant 3, The General Manager cited eighteen months while the Production Manager preferred twelve months. The reasons for this are explored more fully elsewhere but it seemed that as long as the new technology was actually in use then it was considered to be a success by the managers. The difficulty I had in gathering actual production data for such items as carcase and skin damage, both significant to the profit per carcase, suggested that either there were inadequate monitoring systems in place or the managers concealed the true figures. There is some evidence that both these occurred.

4.2 *Justification of the Use of Payback Time as a Measure of Success*

This is a qualitative study, the bulk of the data being drawn from interviews and observation. This data seeks to answer "why" and "how" questions about the different plants in the study and the process of change management. However, before attempting to answer such questions and rendering any judgements as to their relationship to performance, it is necessary to establish the relative success of each plant in terms of the introduction of new technology. To do this the study focuses on quantifiable, objective outcomes.

It would have been possible to use more subjective measures to estimate the relative success of each plant, for example the outcomes for butchers on the chain in

terms of how they experienced the new technology. The chief reason I did not use such measures is that people's subjective experiences form the main body of the research data from which explanatory constructions are drawn. It would be tautologous to use this data both as the measure of success and as the explanation for such success. A further reason for employing a separate, more objective measure is that it provides some degree of triangulation (Jick, 1979) and verification of any more subjective estimates emerging from the interview and observation data.

For the purposes of this study we define the degree of success as the number of years it took each plant to recover the initial investment in the new technology - the payback time. This measure was chosen for two main reasons. Firstly, this is the measure that the plant managers themselves use, both to justify the investment and to monitor progress. Secondly, this measure relates directly to the new technology with few intervening variables. The use of other quantifiable measures, such as profitability of the plant, allows too many interfering factors to enter the equation. For example, all the plants, even the smallest, were not concerned solely with slaughtering sheep. They also slaughtered beef and sometimes pigs. They each had boning , fell mongery and by-products departments. The performance of any of these departments contributes to the total revenue of the plant. Measures of the total performance give us little indication of the performance of individual departments. Such macro performance measures make inter plant comparison much more difficult and do not allow us to distinguish effects from other departments, especially in the larger plants.

Payback time as an assessment of alternative investment opportunities is generally viewed by the management accountancy literature as being inferior to other

methods such as net present value. (Brealey & Myers, 1984; Ch 5). The primary reason for this is that payback time schedules often give false results in that they select the proposal which recovers the investment the fastest but ignore later streams of income which may be greater over a longer term. In other words, a proposal which takes longer to recover the initial investment may produce a greater stream of income in the longer term. - the net present value (NPV) will be higher.

There are three reasons why NPV methods were not used. First, they had no alternative schemes to compare with this choice of new technology other than to continue with the current system. Second, none of the managers or staff responsible for and sponsoring the new technology were sophisticated managerial accountants nor were there in place any sophisticated programmes for assessing investment proposals. The basic pay-back scheme offered by MIRINZ, the research institute which developed the technology, was accepted. Thirdly, the new technology was presented as being capable of recovering its investment in less than two years and short term considerations were of greater importance than longer term ones and, as one manager expressed it, in the meat industry "This is the way it's always been done."

This attitude raises further questions about the rationale for the new technology and management decision making which we will explore later. Briefly, it seems that, in addition to the expectation of lowering costs and improving quality, managers made the decision to install the new systems because they were available, there was a culture of new technology adoption and a fear that if they didn't install them then their competitors might gain an advantage over them. A further reason, expressed by one manager, was that increasing automation inevitably lowered the numbers of meat workers. This was seen as a good thing in the long run, even if it

proved to be costly in the short term, a reflection of the culture and history of antagonism between the meat workers and managers.

An interesting point here is that, of the four general managers at the plants, two of them had "come up through the ranks" and had little formal management training. The most successful plant was managed by one of these. The other two managers both came from backgrounds as food technologists with little formal management training. However they were trained in formal analytical techniques. Indeed one of them kept a detailed, computerised record of costs, production etc in a sophisticated package. This was the plant which performed the worst and where there were the strongest suspicions voiced about the covering up by management of the true amount of skin damage.

4.3 *Reliability of the Data*

Wilkinson (1983, p 82) makes the point that the success of technological change is notoriously hard to measure with any degree of accuracy. In the cases he examined he found that in practice that "there was simply no accurate measure of productivity gains or of comparative improvements in efficiency." (p 83).

Payback times provide the primary means of assessing success but there are also other production figures, relating to payback times, which can assist in broadening the assessment. First, there is the time it took for each plant to achieve the full target throughput on the new chain - the length of the trial period. Second, there are the figures for carcase and skin damage.

The first of these two categories of data were simple to obtain and reliable. However, it proved difficult to obtain reliable data for carcase and skin damage. In

two cases I could obtain no data for skin damage from management at all and in the other two plants I had reason to be suspicious about the figures that were provided. The reasons for this will be explored in more detail later. For this reason I have omitted carcase and skin damage data from the calculation of payback times for the purposes of comparison between the plants. I was able to obtain figures, albeit unreliable, for carcase damage and these are presented below (Fig 4.4).

Even with these figures omitted, we shall see that payback times in all cases were considerably longer than the maximum of 12 to 18 months budgeted for in the investment decision process. Comparison was further complicated by the peculiarities of each plant's characteristics and situation at the time of the change. For example, a shortage of stock during the first year of introduction at Plant 3 lead to short weeks and an unusually short season which seriously affected production. Plant 3 also had a different kind of hide removing technology which proved to be very problematic.

However there was a clear differentiation between the shortest and longest payback times so that we can rely on the figures to rank the plants for the purposes of comparison.

The plants in the study all had new technology investment schedules based on payback times of between 12 and 18 months. However, as the Meat Industry Study indicated, managers appeared to seriously underestimate the costs associated with implementing the new chains and associated machinery.

4.4 *Modelling of Payback Tables*

Calculations of payback times use actual gross production figures for each plant, adapted to a standardised formula based on the MIRINZ schedule used by the plants as a basis for their own calculations (Table 4.1).

Data supplied by MIRINZ for average plant				
	MANUAL	**AUTO**	**MANUAL**	**AUTO**
	8	9.5	8	9.5
MIN/DAY	420	420	420	420
DAYS IN SEASON	133	133	145	145
ANNUAL KILL	446880	530670	487200	578550
BUTCHERS	50	40	50	40
LABOURERS	40	31	40	31
LABOUR COSTS (($/ccs)#	5.05	3.36	5.05	3.36
MACHINE COSTS ($/ccs)	0.05	0.81	0.04	0.75
TOTAL COST ($/ccs)	5.10	4.18	5.09	4.11
CCS/BUTCH/DAY	67	100	67	100
REL COST SAVE/CCS		0.92		0.98
REL COST SAVE/YR		487877		568684
PROFIT/CC ##	5	5.92	5	5.98
TOT PROF/YR	2234400	3141227.3	2436000	3461433.8
TOT INCR PROF/YR		906827.25		1025433.8
CAP INVESTMENT ###	59000	1235000	59000	1235000
ANN. COST INVESTMENT *	20650	432250	20650	432250
PAYBACK TIME (YRS)		**1.36**		**1.20**
# Labour costs based on Butcher's wage of $213 per day (inc o/h of 25%)				
plus Labourer's wage of $158 per day (inc o/h of 25%)				
## avge profit/ccs before and after change				
### figures supplied by MIRINZ				
* Ann cost of investment calculated as follows:				
Tot cost * (int exp @ 15% + R & M @ 10% +deprec @ 10%)				

Table 4.1 Theoretical costs and savings of new technology

Table 4.1 shows the original estimations of MIRINZ engineers of the savings possible with the new technology. They present two scenarios - one with a season of 133 days (26.6 working weeks) and one with a season of 145 days (29 working weeks). They further assume an increase in chain speed from 8 carcases per min (ccs/min) to 9.5 ccs/min. Figure 2 shows that this increase (18.75%) corresponds

well with the percentage increase in chain speeds in two of the plants (Plant 2 and Plant 4) but the other two plants had very different results. Plant 1 had an increase in chain speed of 35 %. This was because the original chain there was very old and because they killed a larger proportion of adult sheep rather than lambs than was the norm at the other plants. This meant there was a lower chain speed than to begin with, both to accommodate the aging machinery and the larger, more difficult adult sheep. The final chain speed with the new technology installed was below the other three plants who killed a preponderance of young lambs but the percentage change was greater. Plant 3 had only an increase of 1.9% in chain speed almost entirely due to the major problems they had in adapting to the new technology. (Figure 4.2).

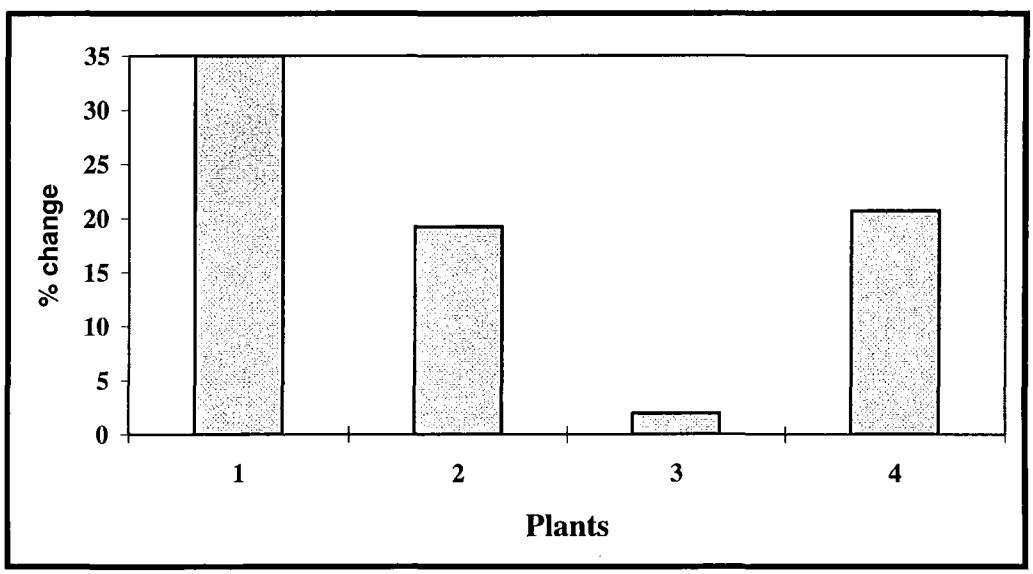


Figure 4.2 Percentage change in chain speeds.

The Mirinz model assumes a decrease in the staffing requirements with the new technology from 50 to 40 butchers (-20%) and 40 to 31 labourers (-22.5%) (Table 4.1). The decreased manning level and increased chain speed are the factors which generate lower unit costs with higher throughput. These figures correspond well for the butchers in Plants 1 and 4 (Fig 4.3).

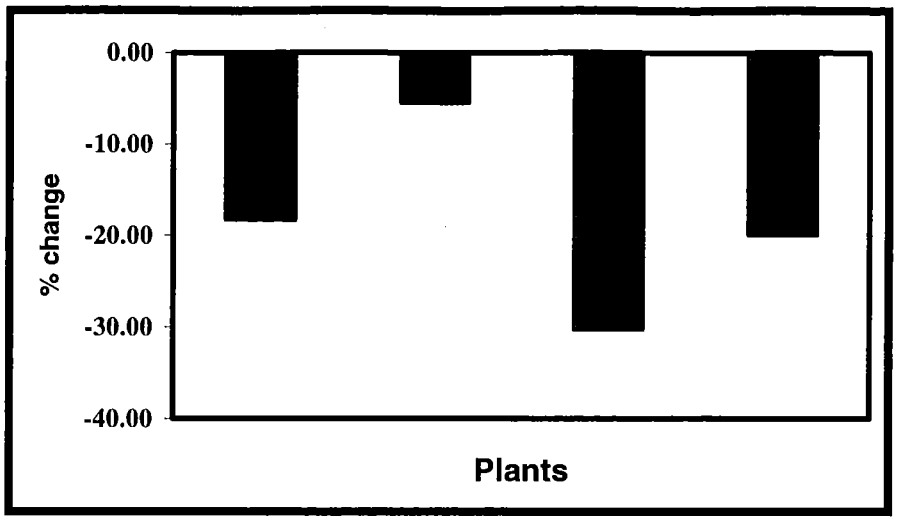


Figure 4.3 Percentage changes in staffing levels.

In the case of Plant 2 there was only a small decrease. The company had introduced part of the new system two years before and at that time had successfully negotiated the downgrading of some butchers' jobs to labourers' and the disestablishment of others and the union stoutly resisted any further downgrading. This meant that, in terms of the payback schedule, with little saving in butchers' numbers, plant 2 was disadvantaged relative to the other plants and hence should have a relatively longer payback time. However, balancing this out is the relatively lower capital investment figure for plant 2, a result of their installation of part of the new technology previously, the factor which enabled management to lower the butcher numbers at that time.

At Plant 3 there was a decrease of 31.43% in butcher numbers. This was because they had a high number of butcher positions on the old chain, but they were paid at significantly lower rates than the other plants. The resulting number of butchers, however, was not significantly different from the other plants, although the relatively low rates of pay remained.

4.5 *Relationships Between the Variables*

In common with other sequential processes, many of the independent variables used in the calculation of pay-back times are inter-related. For example, an increase in chain speed allows more carcases per minute to be processed, which increases the potential daily kill. This figure, multiplied by the decreased cost of labour and the increased cost of machinery gives a total cost per carcase. If the daily kill is too low, then the cost per carcase will be higher than the cost using the old technology. The new technology depends on increased throughput to be economical. Savings made on labour costs are negated if throughput fails to reach a high enough quantity. Throughput is vital to ensure the viability of the technology. This sets up a tension with the professed new culture of quality first. The traditional culture of meat industry economics emphasised throughput above all else. This orientation grew out of the old government sponsored, commodity market paradigms where the aim was to push as many carcases as was possible along the processing chain. Quality was not a significant issue and neither was cost. As the government withdrew from subsidising the industry and traditional markets dried up, the industry looked for new paradigms. The emerging culture attempted to focus on quality, adding value through further processing and cost cutting.

However it proved difficult for some plants to combine increased speed of processing with higher quality. This posed a dilemma for the plant management. They could only justify the new technology by running the chains at higher speeds but at those speeds they risked eroding profit through increased carcase and skin damage. It appears that the tension was resolved by falling back on the old paradigm and concentrating on increasing throughput. This is a possible reason why it was so

difficult to obtain accurate figures for damage from some plants. Management tried to conceal the amount of damage, relying on throughput figures to judge the success of the implementation, at least as far as Head Office was concerned.

However, the figures for carcase damage that were obtained correspond well with the overall findings of effectiveness for each plant. (Fig 4.4).

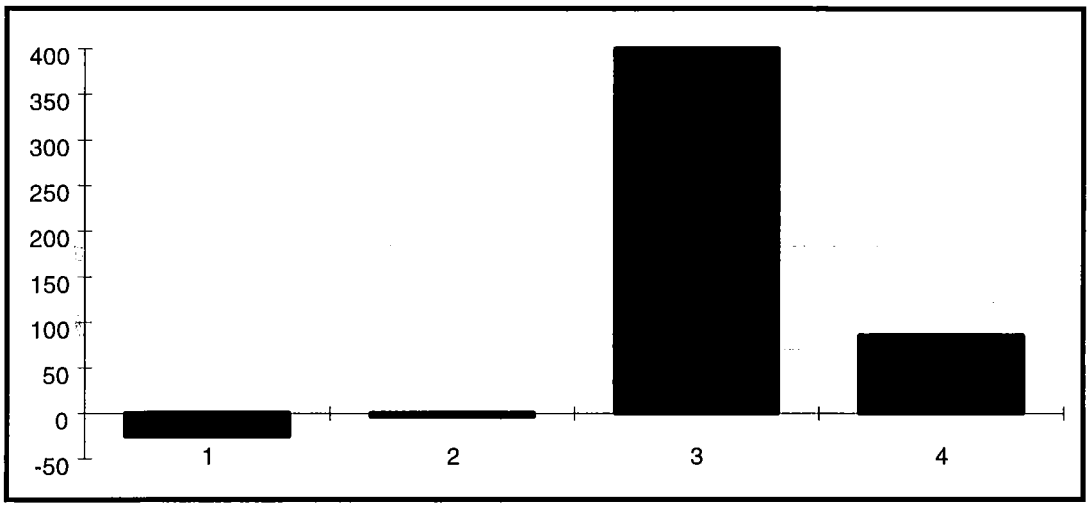


Figure 4.4 Percentage change in carcase damage.

Plants 1 and 2 both experienced decreases in carcase damage while plants 3 and 4 reported some increase. Plant 3 increased 400% while plant 4 increased 85%. It should be noted here that although these sound like massive increases, the base numbers are low - in the order of 4% damage on average for all the plants before the change. However, the increase at plant 3 was a cause for some concern.

It is tempting to look for a single measure that will indicate how successful the new technology is. This is difficult, given the inter-relatedness of the data categories. However, a perusal of the data for each plant shows that if we take the increase in throughput figures and carcase damage together, we can see that plant 3, the worst performing plant, experienced both a *drop* in throughput (-5.7%) and a large increase in carcase damage. Plant 3 was unable to capitalise on either the old paradigm

strategy of increasing throughput or the new paradigm strategy of an emphasis on quality.

4.6 *Payback Times*

Fig 4.1 shows the relative payback times for the four plants. Plant 1 was the most successful with a payback time of 1.5 years and Plant 3 was the least successful with a payback time of 5.5 years. Plants 2 and 4 had payback periods of 2.37 years and 3.76 years respectively.

One characteristic differentiating performance was immediately obvious. From these figures it was clear that the smaller plants performed better than the larger ones. But within the size categories there were also clear differences Many other characteristics of the plants, however, affect the success of the introductions. These will be explored later in the main body of this report.

Of the four plants studied, Plant 1 enjoyed the most successful change, measured by the time taken to repay the investment. The investment in new chains and machinery was repaid after 2.3 years. The plant also took only 2 months to reach full tally at 98.8% efficiency, while Plants 2 and 4, the large plants, needed a full 12 months to reach full tally (Fig 4.5).

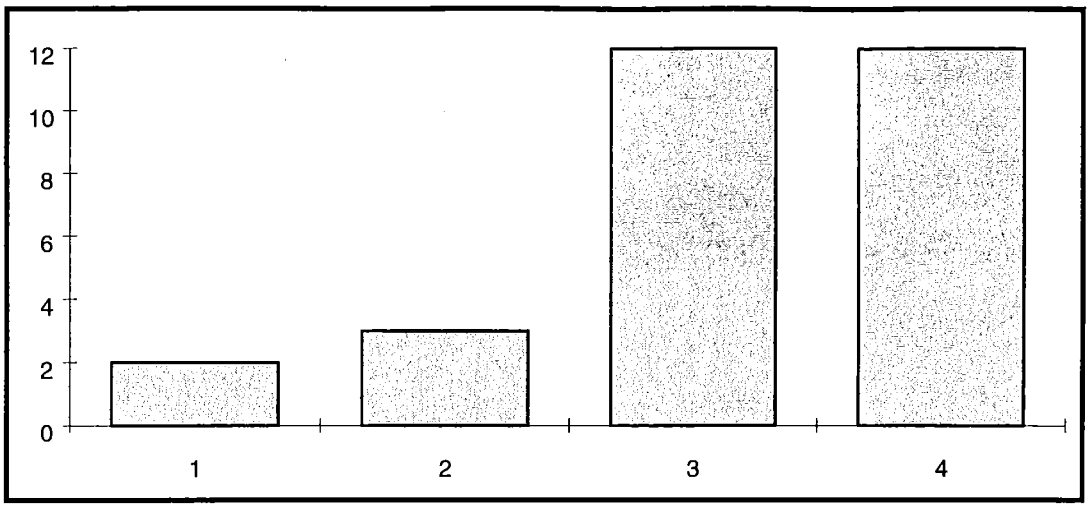


Figure 4.5 Months taken to reach full production capability.

The daily production at Plant 1 was increased by 42% after 6 months. After one month a 35% increase was attained and the full target tally was achieved after 3 months trialling the new system. The success of the trial meant that the employees' jobs were secured at least in the immediate future. A comparison of the changed production figures for each plant can be seen in Figure 4.6. Plant 3 actually experienced a drop in production owing to a combination of poor stock supply that year and major difficulties with the new technology.

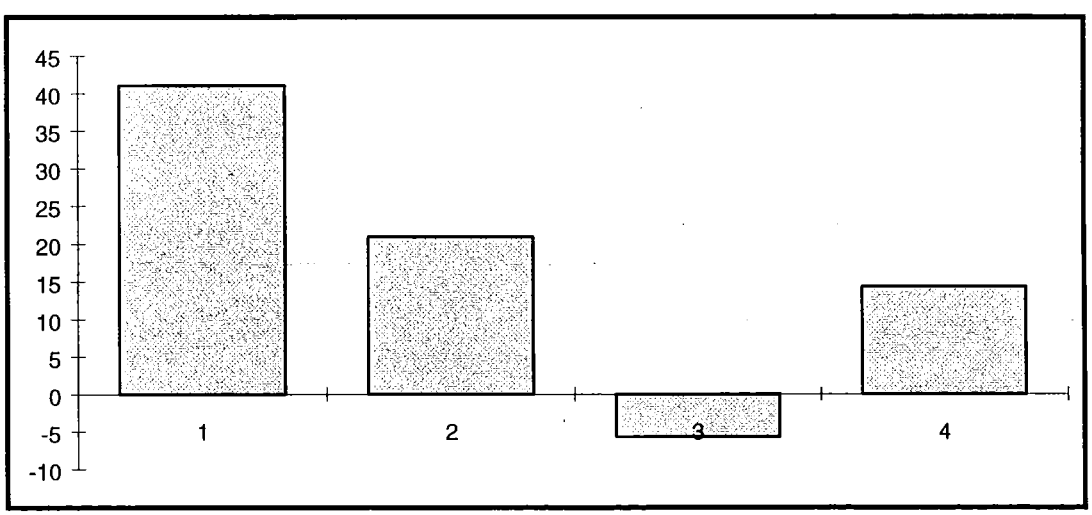


Figure 4.6 Percentage change in daily output.

Carcase damage at Plants 1 and 2 had fallen after three months trial with the new system but at both the larger plants, carcase damage was still markedly increased after three months trial (Fig 4.2).

In summary (Table 4.2), the two smaller plants both achieved lower payback times than the two larger plants but this difference is difficult to attribute to the size factor alone as there was a considerable difference between both the two smaller plants and the two larger plants. In particular, Plant 1, the most successful plant, had the highest per chain cost of all the plants. Plant 2 had installed some machinery in the previous season and, if size was the most significant factor, one would expect Plant 1 to have achieved the best result.

Plant number	Payback Ranking	Size
1	1	Small
2	2	Small
3	4	Large
4	3	Large

Table 4.2 Summary of findings

Chapter 5

New Technology in the Export Meat Industry

5.1 *Introduction*

Before looking at the new technology we need to define exactly what we mean by this term in this dissertation. It is important to define what is meant by `technology' in this study, as the term appears to be used in a wide variety of ways. McLoughlin & Clark (1988; 102) point out that there is very little agreement on the question of how `technology' should be defined. While some assume that the term `technology' means more or less the same as `machinery' or involves only technical factors of work, others see it as having a wider meaning. The main argument turns on whether to adopt a restrictive, tight definition which excludes everything but the actual hardware, or to widen the definition. Batstone et al (1987) summarise these arguments and recommend a restrictive definition. They maintain that a problem with broad definitions arises because much of the research reported in the literature focuses on the effects or impact of new technology on one of the factors within the workplace and it is difficult to do this if the dependent and independent variables are being merged into one factor.

Much of this broadening of the definition of `technology' has occurred in Social Science research which has seen the definition extended to include "all forms of productive technique, including handwork which may not involve the use of mechanical implements. Secondly it embraces the physical organisation of production, the way in which the hardware of production has been laid out in a factory. The term therefore implies the division of labour and work organisation which is built into, or required for efficient operation by the productive technique.

Thirdly, machinery and the organisation of production are human products, in the sense that they have been consciously designed" (Hill,1981: 86).

This definition points to two dimensions of technology. The machinery or hardware and the organisation of production or system in which the hardware is embedded. Winner (1977) introduces another dimension he calls `technique' which refers to the skills and knowledge needed to use the hardware. McLoughlin & Clark (1988:103) feel this definition, while being an improvement because it distinguishes three separate levels or elements of `technology', still fails to solve the problem noted above, that of submerging the dependent variable. They propose an "engineering system" definition developed by Clark et al. (1988:13) composed of three primary elements, `...system principles, an overall system configuration, and a system implementation or physical realisation in a given technology.". These definitions are useful because they enable us to focus on different components of the technological phenomenon. However, we are not focussing on the effects of new technology in this study. The **process** of new technology introduction is the topic of interest and so it is possible to open up the definition to include as many aspects as we need to arrive at an understanding of the processual elements involved in technological change.

Our definition of "new technology" then, will include the hardware, the organisation of work around the operators and hardware and the skills and knowledge needed to operate the system.

New Zealand's economic development over the last century has been largely dependent on agricultural exports which constituted 53% of total merchandise exports in 1991. One third of this total is derived from sheep products - meat, wool, skins and by-products. In dollar terms this was worth approximately $2.5 billion.

But sheep meat was not always so valuable. From 1840 to 1880 the value in the growing sheep population lay mainly in the wool produced. The demand for meat from the relatively low human population was correspondingly low and excess sheep were disposed of at low prices. But often unwanted sheep had to be destroyed and buried by the farmer as no buyer could be found at all. In England the situation was different. The growing population of towns caused by the advent of mechanical agricultural machinery and the growth of secondary industry saw increasing demands for a cheap source of food. Attempts were made in this country to capitalise on this demand and optimise the value of the sheep by establishing an effective way of preserving meat so that it could be transported 19,000 kms across the sea. Various methods such as canning and boiling down were tried and abandoned as being unprofitable.

In 1880 the New Zealand and Australian Land Company decided to trial a new system of refrigerating meat developed in France and Britain. On the 11th of February 1882, the *Dunedin*, a refrigerated boat, sailed from Port Chalmers with 4900 frozen carcases bound for London. The *Dunedin* arrived 98 days later and all but one of the carcases were in good condition and were sold for twice the going price that could be obtained in New Zealand. This success was enough to spur the development of the New Zealand Meat Export Industry. Within 20 years there were 20 freezing works killing 3.5 million sheep per year (NZMIA 1986) .

Killing and processing were carried out in sheds with solo butchers working in small teams with one or two labourers. The larger sheds had up to 100 butchers at the height of the season and the sheds were set up to process the whole animal on one site. In addition to killing, the carcases were dressed, graded and frozen and by-products

such as casings, tallow, blood and bone, skins, wool and offal were processed. With butchers, labourers and process workers, the meat works were large scale employers. A solo butcher killed 100 lambs per day. The pace was set by an experienced butcher known as the "clock" who was often the union delegate. The delegates made sure that no-one worked faster or slower than the standard rate set by the "clock", although it was known that some men, the most experienced `gun' butchers, could kill as many as 150 per day.

The butchers' skills were a critical factor in the profitability of the export meat processors and they organised themselves through the powerful freezing workers' unions, using this power to leverage rates for their services, striking frequently for more pay and better conditions. The butchers took great pride in their skills and their solidarity and characterised themselves as `the knights of steel' and they "constituted an aristocracy of labour [who] were a highly mobile group following the seasonal `killing season' around New Zealand and Australia" (Willis 1985). Through the 1920s, using tactics such as the closed shop, the union became increasingly strong and militant - and sought to control more and more of the process. They would decide the speed at which killing was carried out, the price for doing this and how it was to be done. Managers of plants could not guarantee when killing would be done, how long it would go on and how much it would cost. The owners and farmers grew increasingly restive about this and were seeking ways of breaking the power of the butchers and gaining more control over the production process.

Two new factors entered the scene in the late 1920s. Recession, growing into full scale depression in the 1930s, drastically altered the power balance in favour of the employers. The growth of a large army of unemployed who were more than

willing to work for whatever they could get weakened the position of the union considerably.

At the same time a new killing technology was becoming available overseas, and the multinational owners in New Zealand and Australia were keen to invest in this as it held the promise of increased efficiency and, perhaps more desirably, would help to break the dominance of the butchers through mechanisation of the killing process (Willis,1985; Inkson & Cammock 1988).

This new technology was the chain system. Using classic scientific management principles, the complex work of the solo butcher was reduced to around forty simple actions. What formerly took a three year apprenticeship and years of experience to perfect was now rendered available to almost anyone after only a few days or weeks of training. The system had been developed in the meat industry in Chicago around the turn of the century and spread slowly to Argentina. In 1932 the meat companies took advantage of the 20% unemployment rate and related pool of unemployed and the chain system was introduced into New Zealand. The unions put up a strong fight but the companies were determined to smash the power of the butchers once and for all and brought in unemployed people under protection of the police and trained them in the new system. It was very slow at first but it was not very long before the chains were killing around the same number of lambs and sheep as before. Moreover, the people working the system were being paid as little as 40% of the old butcher's rate. With the lack of alternative employment, many butchers capitulated and came back to work on the mechanised chain with greatly reduced skill levels and pay. The companies considered the new system to be a great success. It

was cheaper to run and employers now controlled the process. By the 1950s all solo butchering had been replaced by the mechanical chain system (NZMIA, 1986).

The chain system consisted of a moving conveyor or chain which carried carcases along from the killing area - the sticking pen - to the freezer where the dismembered carcase was stored until transportation out of the plant. The chain, with the carcase suspended head down from hooks, moved at approximately 4 metres per minute past work stations where separate tasks were performed, each one simplified to the point where each person had only to make one or two cuts or actions. But the separate tasks were not balanced in the degree of skill or effort required to carry them out. Some jobs, such as hanging the legs up onto the hooks, were very easy and required no training at all. Other jobs, such as legging and pelting, required both greater skill and greater effort. This problem of unbalanced tasks on the chain still exists today, even though most of the heavy jobs have been partly or fully automated in the plants under study.

These chains had approximately 32 butchers plus 4 spares working on them and an average daily tally was 3100. By the 1950s and 1960s tallies had increased to 3500 and manning levels had increased to 38 butchers plus 4 spares. In the 1970s a radical change occurred in the hygiene requirements demanded by overseas customers. These new requirements meant that huge investments had to be made to upgrade freezing works and the numbers of butchers required to fulfil the stringent new regulations almost doubled. Within the space of a few years butcher manning climbed to 61 plus spares per chain. This increase in manning greatly increased the unit cost of processing as the number of animals killed per man almost halved. It is interesting to note that, as can be seen in Figure 5.1, tallies have only just reached the 100 kill per

day per man that pertained in the old solo butcher days. This has been achieved through the intensification of mechanisation on the chains, increased speeds and increased tallies. As a result, although the work is often easier than it used to be, the people doing it are having to work much faster.

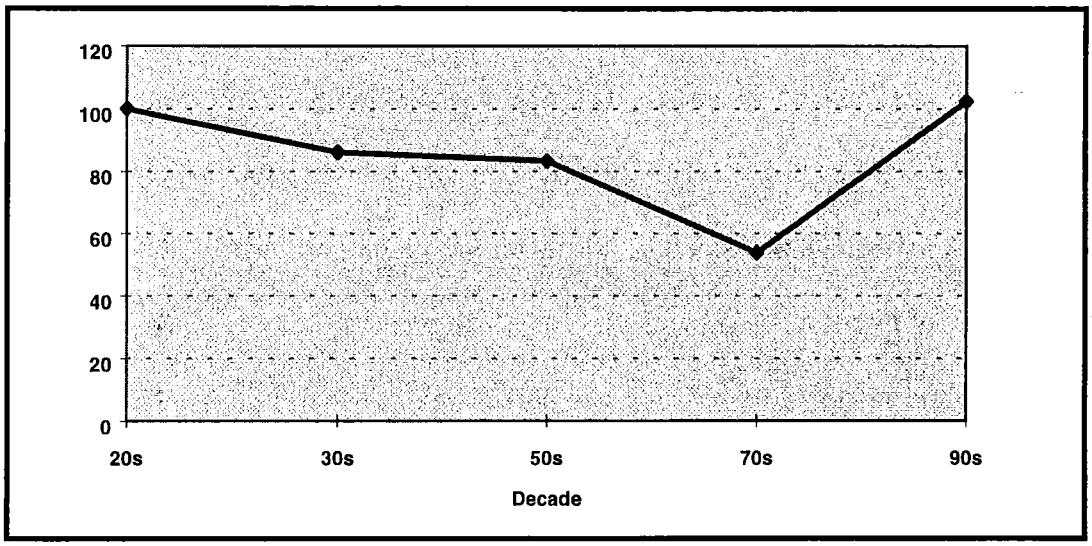


Figure 5.1 Kill per man per day 1920s - 1990s

The manning requirements ushered in by the new hygiene regulations meant that there was a real incentive to develop automation and more efficient hardware on the chains to cut wage costs and increase the tally. This incentive was reinforced by the fact that the butchers had over the years gradually rebuilt their solidarity, their pride and most importantly of all, their high wage status after their defeat in the 1930s. The meat companies once again found themselves not fully in control of the production process. Strong, well organised freezing workers' unions once more had a large say in what happened on the killing floor.

The original chain system remained much the same until the early 1980s when a new system was developed in New Zealand - the Annan system - otherwise known as the inverted chain. This new system inverted the carcase so that it was

hanging by the front instead of the back legs. This configuration facilitated the introduction of automation to key tasks on the chain, thus allowing cost savings and other efficiencies.The tasks which companies were interested in automating were those which either used the most labour or where it was felt that a machine could produce more consistent quality on valuable parts of the carcase such as the hind quarters or where both conditions applied. For example Table 5.1 shows how areas like the pelting operation were chosen for the first application of automation because of the relatively high numbers of butchers involved. Pelting was also chosen because the hides are of high value and the work is physically arduous. But there was another reason for choosing this part of the disassembly process. The pelters and leggers who worked in these areas were the most cohesive group on the chain. They were tough and skilled and saw themselves as the "creme de la creme". These elements together meant that the pelters and leggers made up the hard core of the butchers' solidarity. Automating their work would contribute considerably towards re-establishing control. Another area chosen for different reasons was the wide to narrow spreaders and front trotter removal. Both these operations are relatively simple and thus easy to automate.

Table 5.1 Comparison of manning levels with manual and mechanised operations.

	Manning		
Operation	**Manual**	**Mechanised**	**New Technology**
Shackle, spread, open,locate,stick, clip	**5**	**5**	
Neckbreak, cheek, nose roll	**4**	**2**	**Neck breaker**
Y cut, flap, flay, drill, spade, front socks, anus trim	**8**	**6**	
Wide to narrow spread	**2**	**0**	**Wide to narrow spreader**
front trotters	**1**	**0**	**Front trotter remover**
Crutch, rip, rear socks	**3**	**3**	
Remove Pelt	**7**	**3**	**Shoulder puller, Final puller**
Rear trotter, gambrel, head, tongue	**3**	**3**	
Ring, strip, gut, brisket cut, pluck	**6**	**6**	
Total butchers	**39**	**28**	

5.2 *The Machinery*

This section will briefly describe the new technology and look at the theoretical costs and cost savings, stemming from its use. Table 5.1 lists the machinery that was installed in the plants under study and Plates 1 - 6 illustrate what the technology looks like.

All the machinery described here was designed at MIRINZ. There are other machines which have not been so widely adopted or have been installed in some plants and later removed. For example, the Wide to Narrow Transfer was installed at Plant 2 but later removed as it could not be made to work.

The Rotary Puller (Pl. 1) was designed in New Zealand at MIRINZ and was championed by one company. This is a totally different machine to the technology

described above. Firstly, it is massive in size, approximately 6 metres high and with a diameter of 5 metres, dominating the space in which it sits. Secondly, it is more complex, carrying out the tasks of both the Shoulder and Final Puller, using advanced electronic and hydraulic systems. These factors mean that the machine is also much more expensive than the others described, being in the region of $500,000 for each machine but was designed to replace more butchers than the cheaper alternative combination of shoulder and final pullers.

The Neckbreaker (Pl. 2) is a fairly simple machine costing $45,000 and potentially saving the cost of two butchers. This is used in all the plants except Plant 3.

The Wide to Narrow Spreader (Pl. 3) automates a very simple function formerly carried out by one butcher and costs $45,000. At one point in the inverted chain system the legs by which the carcase is hanging are spread too wide for the next operation in the sequence. The machine transfers the legs to a narrower setting. Plate 4 shows the Front Trotter Remover. This is a simple machine, costing $35,000 and replacing one butcher.

The Shoulder Puller (Pl.5) is a much larger and more complex piece of machinery and this is reflected in the price of $95,000. This cost is justified because it replaces three butchers and relieves them of a very arduous task.

The Final Puller (Pl. 6) completes the job begun by the Shoulder Puller. This is not as complex as the Shoulder puller, replacing 2 butchers and costing $65,000.

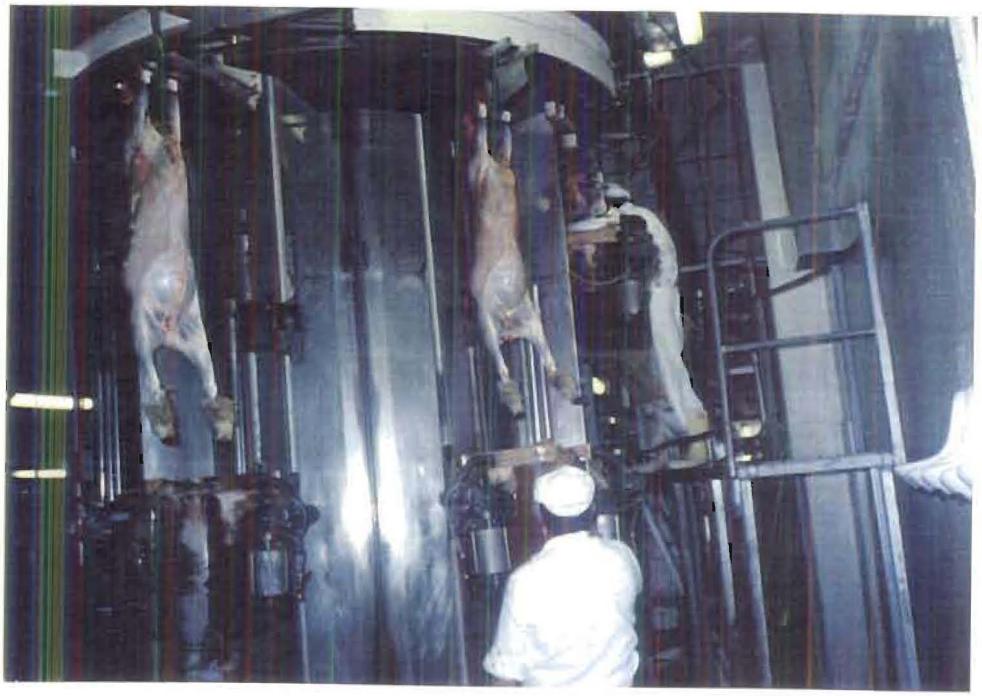


Plate 1 Rotary Puller

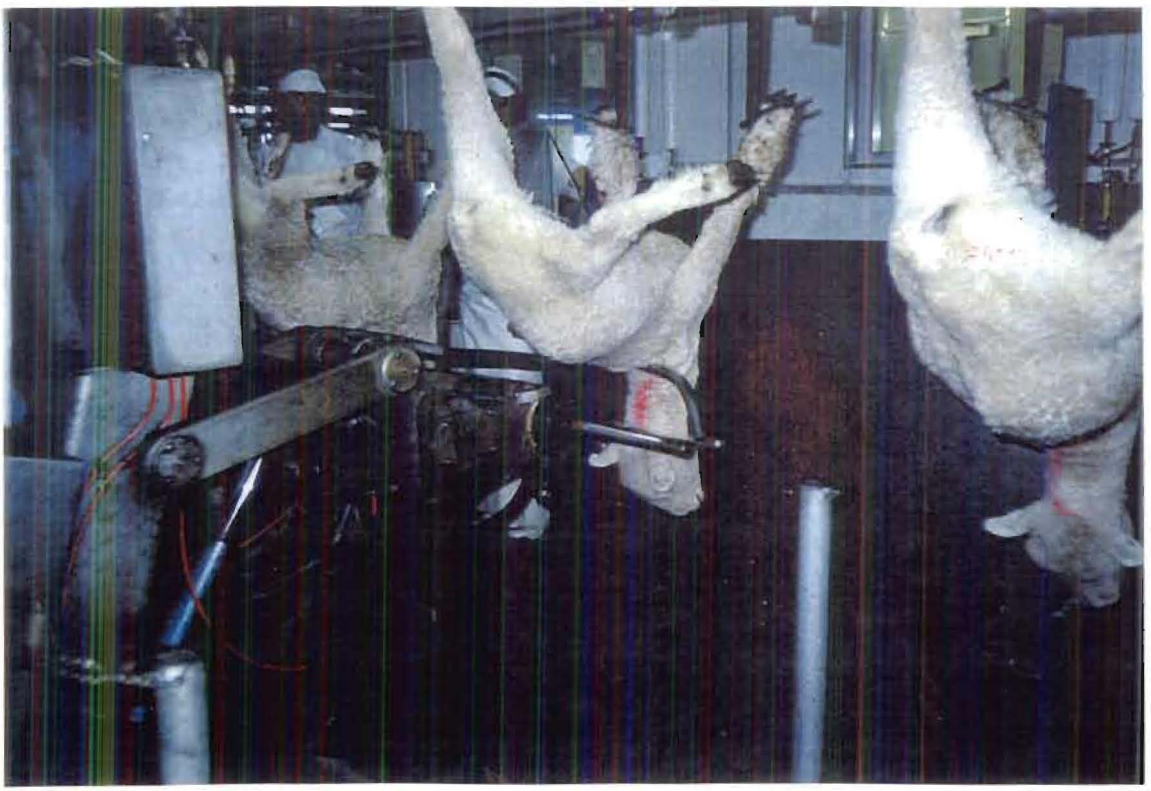


Plate 2 Neckbreaker

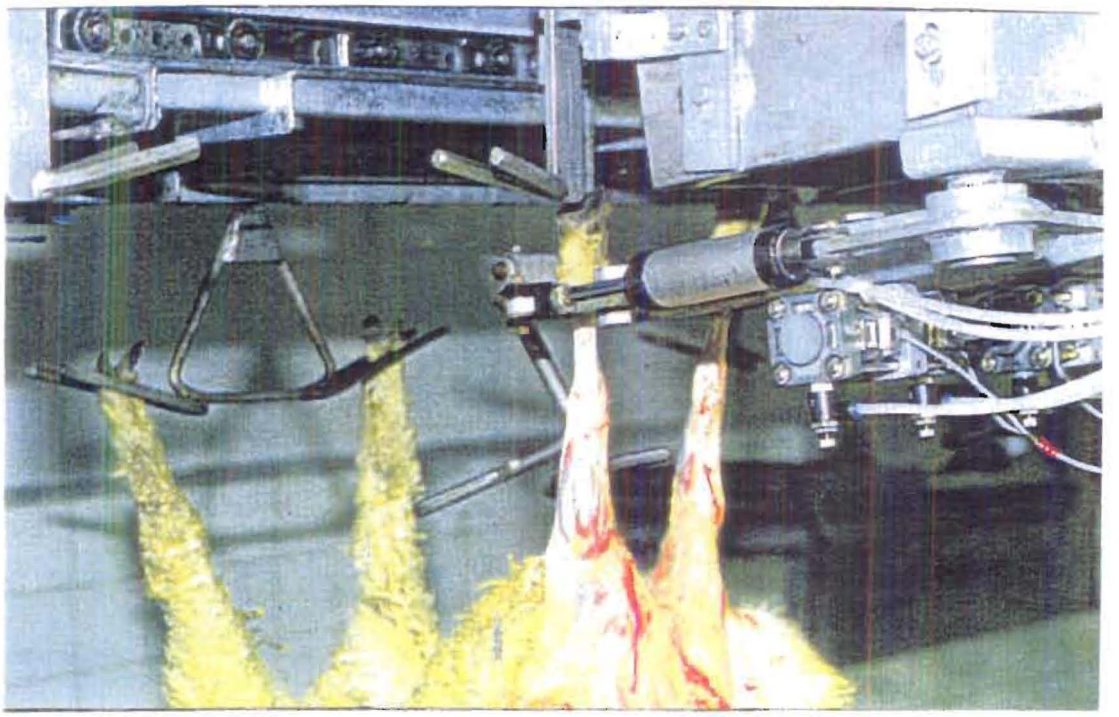


Plate 3 Wide To Narrow Spreader
(Courtesy MIRINZ)

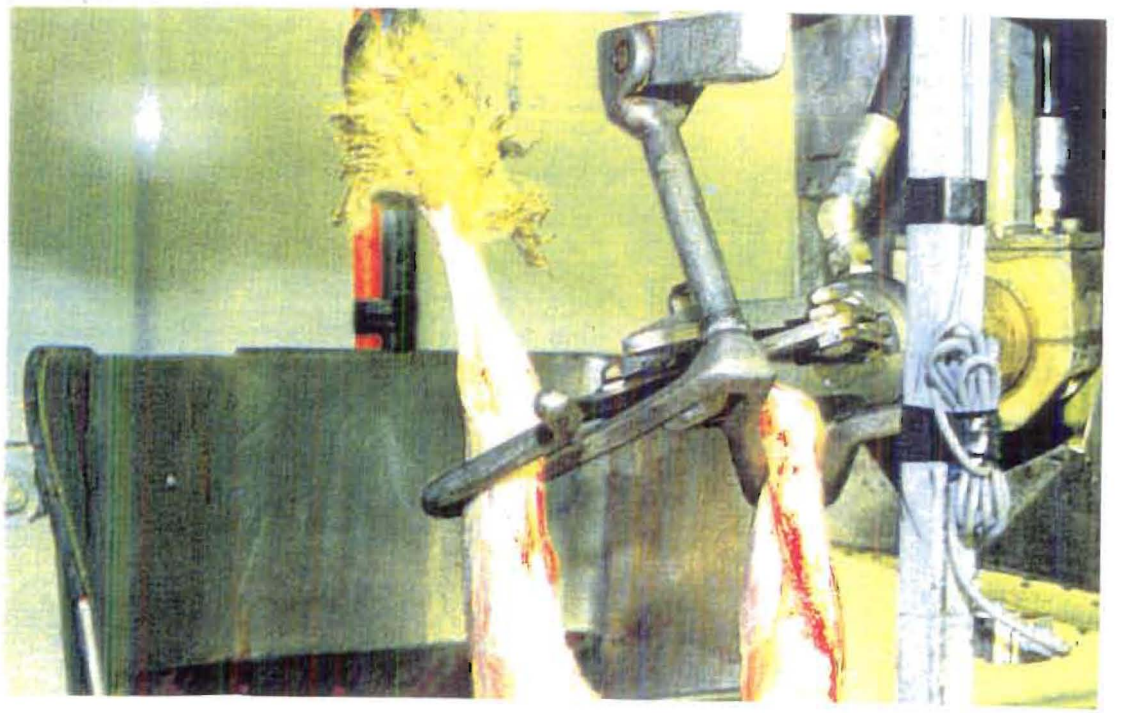


Plate 4 Front Trotter Remover
(Courtesy MIRINZ)

Plate 5 Shoulder Puller

Plate 6 Final Puller

5.3 *The Economic Rationale of New Technology in the Plants*

An examination of cost savings assumes full knowledge of the costs of the process that is to be improved through the introduction of new technology and of the costs associated with the new technology and its introduction. If both these things are known then the economic decision can be made as to whether to go ahead with the introduction or not using straightforward decision models. The plants under study all carried out this exercise in order to get permission from their Head Offices to go ahead with purchase. They all had to be able to show that the investment would meet required payback criteria.

In general payback period requirements seemed to be around one year. However interviews with production management staff at various levels in the same plant revealed that there would often be some variation in what each manager thought was the payback period regime under which they were working. One would say one year, another would say eighteen months. It was also difficult to obtain hard data on certain critical performance standards and costs associated with the new technology compared to the replaced system not because of an unwillingness to share this information, but because the information was not available in any readily accessible form, if at all. For example, the skins can make a significant contribution to the overall profit from each carcase. In 1991 dollars a carcase realised, on average, about $45 to the processor. Of this return a first grade skin, depending on the market, can realise as much as $10, a significant contribution to total revenue. If the skin is damaged in processing and downgraded to third grade it will lose at least half its value. Typically, when the new technology is installed, especially the hide pullers, the percentage of damaged skins increases during the running-in period. This running-in

period can last anywhere from 3 months to 6 years (sic) during which time increased losses from skin damage will occur. If the amount of skins downgraded to thirds increases from an industry norm of around 2% to 10% in a single chain plant with a tally of 3990 per day, open for 200 days per year, this could represent a loss of over $300,000 per year. For a four chain plant the loss is correspondingly higher. There are two points to be made here.

Firstly, in all the plants studied, estimates of these kinds of costs were not included in the preliminary costings of the new technology projects. Secondly, it was not at all clear that accurate records were recorded of the cost of skin damage once the new system was installed. Another possibility is that records were deliberately altered to hide the true amount of damage. In one plant it was alleged by a freezing workers' union delegate that the number of third graded skins recorded did not tally with what actually went through the plant.

Another cost of new technology which may have suffered the same fate was carcase damage due to machinery and/or butcher action during the trial period. While these findings are important, it should be remembered that meat processing is not a standardised production process. With both the examples above there were many factors which could have caused variation in quality apart from the machinery or personnel employed. The size and condition of the animals and how wet they are could cause large variation in how easily the skins could be removed from the carcase or how much contamination occurred.

The actual costs for individual plants will be dealt with in Appendix 1. For now we will look at a typical, averaged cost and savings schedule for an inverted chain with the new technology machines installed on them (Table 4.1). The formula

used is adapted from that used by MIRINZ to detail cost-benefits of the new technology. It was upon these that plants based their own calculations.

It should be noted that the formula does not treat the existing technology as a sunk cost but assumes a full annual investment cost. Assumptions are: a daily tally of 3360 and a season of either 133 or 145 days.

In this averaged model, annual savings of $487,877 or $568,684 are possible. Combined with the enhanced throughput, increased profits of $906,827 or $1,025,433 are possible The capital investment is $1,235,000 which gives us a payback time of 1.36 or 1.2 years. This model takes no account of a slower chain time during the trial period nor any of the extra costs from damage as detailed above. In addition, as we shall see when looking at costs plant by plant, the actual total costs of the changes associated with new technology were in some cases much higher than the amount used in the model as considerable building modification and restructuring had to be carried out at the same time as installing the new technology.

5.4 *Some Notes on the Selection Process for the New Technology.*

The rational actor model of management decision making was questioned by Simon in 1955 when he described the process of bounded rationality limiting the choices open to managers. March (1981) reviewed research which indicated that there are many non-rational explanations for management decision making. For example, Di Maggio and Powell (1983) suggest that mimetic and isomorphic processes, where managers minimise effort and maximise the legitimacy of their choices, influence managers' decisions. Related to this is the concept of the "dominant logic" that

prevails in an organisation or industry (Prahalad and Bettis, 1986; Bouwen & Fry, 1991)

In examining the reasons for selection of new technology as a general strategy and the choice of a particular technology, the study found that the traditional model of the "manager as rational economic actor" had little explanatory power. March (1981) reviewed research which indicated that there are many non-rational explanations for managements' choices of change strategies. Simon (1955, 1957) stressed the influence of bounded rationality and suggested that managers, faced by a huge amount of information, simply choose the solution which is easiest. Evidence from the study supports these assertions. Managers appeared to minimise their effort and maximise legitimacy of their choice by both defining problems and choosing and implementing solutions in an isomorphic manner (DiMaggio and Powell, 1983). They monitored the actions of their peers in other organisations and emulated their strategies. These mimetic processes provided managers with a legitimised strategy. The evidence from the study suggests that in some cases prior economic evaluations of the new technology were at best optimistic and projections of payback times seriously underestimated the true costs.

Prahalad and Bettis (1986) wrote of the prevailing dominant logic in an organisation when conceptualising problems faced by the organisation and referred to a "mind-set or world view" held by managers. Evidence from this study suggests that not only was this apparent in the plants under study but that there was a wider, industry dominant logic which encouraged isomorphic behaviour in the managers.

A major reason for the failure to estimate true costs was that managers, in reviewing the actions of managers in other plants, failed to recognise the role that the

enacted contexts play in the process of change. A new technology implementation that was successful in one plant may not be as successful in another simply because of the context in which the change is embedded. New technology implementation is more than just a technical phenomenon. Any change initiative must consider the social context as well as the technical. It is the social context which forms the subject of this study.

Chapter 6: Case Study of Plant 1

6.1 *Background*

Plant 1 was relatively small in size, with a single chain, specialising in killing mutton with an additional beef chain with a total of 278 employees for the whole plant. The chain capacity was 3456 sheep. This was the only plant in the study to specialise in killing adult sheep, although it also killed lambs. This was both an advantage and a disadvantage. The ability to kill adult sheep meant that there was more raw stock available for use which enabled the plant to continue working even when there was a shortage of lambs due to such events as high death rates at birth caused by bad spring weather. The disadvantage was that adult sheep are bigger and harder to process and the resulting meat attracts a lower price. It is a tribute to the staff at Plant 1 that, even with a high proportion of such stock, they were able to maintain high chain speeds and low carcase and skin damage with the new technology.

Plant 1 was founded 98 years ago as a local abattoir owned by the City Council, killing sheep, lambs, beef and pigs using the solo butcher slaughter method. It remained a small producer until in 1975 local butchers took over and obtained an export licence.

The plant was situated on the outskirts of a city of 100,000 population but in a distinct community, which provided most of the work-force. Many of the employees went to the same schools, had known each other for years and continued to socialise outside work. These features, the small size of the plant and its history of being a local abattoir, contributed to a feeling that "this is our plant". They did not like interference from union officials or Head Office personnel from outside the plant,

preferring to sort out problems themselves. In fact the butchers would often discipline the chain themselves and would soon put "ratbags" in their place. They also liked to look after the workers at the plant. For example one incident involved the union officials on plant having a quiet word with a butcher who they felt was encouraging younger workers to consume drugs. He was told to desist or he would be reported to management and sacked. The individual concerned saw the error of his ways and desisted from his activities without the need to involve higher management which would very probably have led to his dismissal, as use of drugs was listed in the rule book as a Class A, instant dismissal transgression.

Plant 1 was the only plant among the ten in the company not covered by the Meat Workers' Regional Award. The employees had cited themselves out of the award under the Labour Relations Act (1987) and had their own plant enterprise agreement. This meant that they voluntarily removed themselves from the collective protection of the wider union. This collective protection was a hard won cornerstone of industrial strength in the meat industry and to eschew such protection is a mark of the trust they had in the management and in their own ability to negotiate favourable conditions.

When the other plants in the company went on a six week strike to obtain a redundancy agreement, Plant 1 did not join in because they already had one as part of their enterprise agreement. The men did not feel they needed to strike to demonstrate solidarity with union members in other plants. Their main loyalty was to their own plant and the people in it. They did agree to adopt the new redundancy agreement that emerged from the strike after intense pressure from the union which was not happy with employees at Plant 1 breaking ranks and not joining the strike. The General

manager accepted this but commented that he considered the new agreement to be more favourable to the company than the old one.

When the new owners of Plant 1, the local wholesale and retail butchers, decided to obtain an export licence, they had to engage a new General Manager as none of the current managers had experience of the export meat business. They set a budget of $6 - 7 million and borrowed $5 million to carry out required upgrading to meet export standards and started exporting a year later. The new manager had big ideas but turned out not to have the experience necessary to control this operation.

Five years later they were in trouble. They owed a total of $12m and the business was losing so much money that they had no chance of servicing these loans. The corporate group to whom the total $12m was owed, instead of simply putting the plant into receivership, decided to take it over and add it to their own group of meat plants. This was recent adventure for them as part of a diversification strategy.

An experienced person was sent in by the new owners as General Manager and he found the situation even worse than had been feared. The information and control systems were in a shambles. No-one knew the state of the business except that they had no money. The new GM was given a free hand in turning the situation around. As he saw it

> **"(*the new owners*) were always ready to have a go at some new venture that looked reasonable if it meant they would be front runner in the field. In the first year I had a very hard job trying to sort it all out and wind it back. I spent six months cleaning the place up. We decided there was only one way to go forward - to specialise in sheep and convert to the lowest cost chain in New Zealand. We knew this was the only way we could survive."**

In the early 1980s MIRINZ were trialing their new inverted dressing systems at Lorneville and Plant 1 decided to be one of the first to make the change. The cost would be $5m. in total for the new chains, machinery and buildings.

6.2 *Success Measures.*

Of the four plants studied, Plant 1 enjoyed the most successful change, measured by the time taken to repay the investment. The investment of $2.5m for chains and machinery and buildings was repaid after one and a half years (see Appendix 1). The plant also took only 3 months to reach full tally at 98.8% efficiency. The capital investment for Plant 1 is greater than that for the other three plants because it was only at Plant 1 that new building was carried out that was specifically for the new system and for no other purpose. At all the other plants, only part of the building cost is allocated to the capital cost of the new system because at the same time as installing the new chains, they also added or modified buildings to accommodate ancillary operations such as a fell mongery and boning room.

The potential daily tally with no stoppages and a full day on the new chain was increased by 45%. After one month a 35% increase was attained and the full target tally was achieved after 3 months trialling the new system. Everyone was pleased with the results. The success of the trial meant that the employees' jobs were secured at least in the immediate future.

6.3 *Factors Contributing To Success.*

I have arranged the following section into different areas but it is important to bear in mind that many of the factors are not discrete. Rather they overlap and work

together so that, for example, examples of mutual respect, part of the Empowerment construct, may occur in the section on Trust or Integration. I have separated the constructs for the purpose of exposition and analysis but the actual data from which they are drawn often display interrelated examples of different constructs.

6.3.1 *Trust*

A major proposition of this thesis is that mutual trust is a significant contributor to successful change. At Plant 1 the high levels of trust observed were contributed to in no small degree by the interpersonal skills of the GM and the Plant Manager.

Not only was the GM a highly competent manager, he also had very good communication skills and was able to relate well to the employees. He had a clear, simple vision "Let's all work together to make this place successful" and was able to transmit this to employees at all levels and give them confidence in themselves to achieve it. He invited plant union officials and delegates into management meetings and often attended meetings of the union delegates, at their invitation. An open door policy was practiced with all employees being encouraged to come forward with any problem. The personal quality of the GM was an important factor in establishing and maintaining the positive attributes at Plant 1. In the words of one supervisor:

> **"(The GM) was always around - he was the heart of the change. His style set the pattern for all the managers."**

Anyone could get to see the General Manager or Plant Manager if they couldn't resolve a difficulty with their immediate supervisor or had a personal problem. These managers were, for the most part, respected and trusted by the

employees. The following comment from one of the plant union officials illustrates how this worked in practice:

> **"(The General Manager) was very good - very honest. If he said no to something he always explained why and it was very rare for us to be at loggerheads....He brought this place out of the doldrums. He knew everyone by their first names and he did something else no-one else ever did. He would come and meet with the whole Board of Control (of the union) to tell us what was happening. We all felt like it was our place - we had a purpose - a reason to co-operate with change."**

The Plant Manager, who became the General Manager one year after the change began, enjoyed similar respect. He was an ex butcher and this was seen as a real bonus. A delegate commented:

> **"I know [PM] quite well - used to work on the chain with him at Burnside. He can be a bit of a bull in a china shop but he's okay. He's straight - a man of his word - and everything's negotiable - he'll always listen and talk."**

Before installing the new systems the plant had been through two ownership changes after upgrading from a local abattoir and there had been a lot of problems with managers who knew little about the meat industry and little about the plant and the people who worked in it. In those early days neither management nor union delegates knew a great deal about what was expected of them. The butchers' delegate related to me that he had been a bit of a "firebrand" and was always in conflict mode with management. He felt that both they and the managers were "pigheaded" with neither appreciating the position of the other and this resulted in a high number of disputes. He felt that with the current management there was much better understanding on both sides. He admitted this was not just a result of the change in management but also a change in his and his peers attitudes and approach. He felt this was largely brought

about by the new GM who transformed the plant and motivated them all. This was described by another butcher:

> **"There was a series of Mickey Mouse managers who didn't know what they were doing and the place was a mess. Things were always going wrong and we were always fighting. When the new GM turned up it was like a new lease of life. He really gave us confidence in ourselves and in the plant."**

This confidence was an important factor in stimulating trust. The people working the chain felt confidence in the manager's ability to manage the plant and he felt confident that they could carry out their part if allowed to.

The respect the people manning the chain felt for the managers was mutual. The managers valued the union input as well as the good relations with the employees. As the Plant Manager put it:

> **"The people on the chain give me heaps but they're a bunch of good guys. We're a lot better, can work cleverer with union assistance."**

Some of the butchers had come to Plant 1 from a much bigger plant owned by another company nearby. They had come to work at Plant 1 because they had heard from friends who were there that it had become a much better place to work. They appreciated the radically different atmosphere at Plant 1 and felt that the smaller size was a great help in many respects and assisted in rectifying problems quickly. However they felt that:

> **"It's not just the size, people respect each other here. We don't allow bullshit - it just doesn't help at all."**

The above account tends to give the impression that there was no conflict or labour relations problems at Plant 1 but in fact there was conflict and there were

problems with labour relations from time to time. Some of this was caused by the inexperience of new supervisory staff. A good example of this occurred on my first visit. A young labourer who had been at the plant for only a few months had been late every other day for two weeks. His behaviour on the chain could also go beyond the normal skylarking and become disruptive. One morning he had been late again and was warned for the last time by the supervisor. The labourer shortly after began to throw sheep guts at people and was caught by the supervisor who warned him again. The labourers' delegate became involved and he tried to talk the labourer into behaving himself. However, twenty minutes later the supervisor again caught him throwing guts at people on the chain and called him and the delegate into his office. He then fired the labourer, over the protests of the delegate, who felt he could bring the labourer back into line.

The delegate immediately went off to see the butchers' delegate and the plant union Secretary and they went to see the GM. He called in the supervisor and they all talked it through and in the end the GM upheld the supervisor's decision and the labourer was fired. This caused some bad feeling for this supervisor for some weeks with tension in the air when he was around.

Eighteen months later this same supervisor admitted to me that a if he had been more experienced, he would have been able to sort it out in a much more satisfactory manner and "nipped it in the bud earlier". The GM also told him at the time that he had handled this badly but had backed him up anyway. The supervisor learnt a lot from this and was grateful to the GM for backing him up. By the time of my second visit there was no trace of any problem between the union delegate and this supervisor. The union people did not like the labourer being fired and they felt the

supervisor was acting over zealously but they realised he was new and that they had to help to "train" the supervisor in how to cope with this kind of situation.

In effect, the GM and the delegates acted together to train and socialise the supervisor into the proper way to supervise at Plant 1. The butchers also knew that the GM, although he would support his supervisors in any dispute, would "have a little talk with them" about their style of supervision if he felt they were being a little too enthusiastic. Both the GM and the Production Manager confirmed that they did this. They felt it was important for the morale of the supervisors that they receive support but that it was equally important that they learn the culture of Plant 1. The GM felt that, for the most part, the people on the chain and their delegates were able to control their own people when necessary.

One supervisor who had been at the plant for many years and had been a butcher felt that the positive atmosphere at the plant was at least partly a direct result of:

> **"The personal qualities, style and approach of [the GM]. Whatever his private views, he always believed in dealing fairly with people. He knows us all by first name and established trust and respect for his word. We all consider him to be a "gentleman" and he always explains his reasons for doing anything and tells everyone what's going on."**

A common factor at the other three plants was the tension between the Ministry of Agriculture and Fisheries (MAF) Inspectors and the production staff (see below) causing many problems with production levels. However at Plant 1 this tension appeared to be virtually non-existent and production staff and MAF Inspectors worked together to ensure both a high quality and high output. An indication of how staff behaviour is affected by the prevailing norms and atmosphere was that the senior MAF Inspector who I saw working with production staff on the chain in a harmonious

and positive manner was described as having once been "a real ratbag" by the chain supervisor. By this he meant that he felt the MAF Inspector used to be overly conscientious in the way he carried out his job and appeared to relish the anguish this brought about in the production supervisors. The Inspector changed his approach when the new GM came into the plant but it was the Makeup Agreement that finally brought about such a change that production staff regarded him as one of the team. The level of trust enabled them to work together to achieve quality rather than allowing the issue of quality to become a serious focus for contention, as occurred at some of the other plants and as was the norm for the industry.

The Mutton Slaughter House (MSH) Supervisor told me that they had a new inspector come into the plant and he wasn't used to the way things were done at Plant 1. At first, he kept trying to do things by the book, according to the regulations, as it is done at other plants. After some initial confusion, the new inspector was "taught" by the other inspectors about Plant 1's system. The interesting aspect of this for the MSH Supervisor was that he found that the old way just didn't work. He'd forgotten what it was like and was surprised how inefficient the "regulation" system was.

It is easy to gain the impression from the above account that there was complete amity and trust between all the staff at Plant 1. There were, however, pockets and instances of staff expressing a lack of trust or confidence in other staff or in the company at Head Office level. For example one small group of butchers I spoke to felt that they were not sufficiently recognised for their contribution to the success of the plant. On my last visit, pressure from Head Office was seen to be obstructing the performance of the plant. There was a shortage of stock and to avoid mothballing chains at larger plants or even the closure of plants, the company was

trying to ration available stock between its different plants in an effort to keep them all operating. This meant that there could be short weeks or short days for Plant 1. The best efforts of the GM at Plant 1 to protect the plant from this strategy failed to ensure a full working week for the plant for several weeks. This impacted directly on employees' wages and there were many complaints about this. This strategy was seen as part of a new "get tough" policy on the part of the Head Office of the company and there were accusations of favouritism for other plants who they suspected were receiving more stock and they feared that the kind of confrontational tactics increasingly used by the company at other plants was about to start happening at Plant 1. They felt that the company did not care about them, one butcher expressing this feeling in the following way:

> **"The only difference for them between us and sheep is that we walk out of here at night."**

These feelings of mistrust did not directly affect their feelings for their own GM, but they did start to worry about his ability to go on protecting them from Head Office. But this had little effect on the change process as this was virtually finished or on their desire to make the plant as efficient as possible.

The engineering staff worked very well together and with production staff but on the first visit, it was apparent that the Chief Engineer, who had been at the plant for many years, did not have the confidence of any of the staff. He was isolated from his staff and his role was actually taken by the Second Engineer, who, when the old Chief Engineer retired just before my second visit, became the new Chief Engineer. The old Chief Engineer had little to do with the installation of the new systems, this

being carried out by a team headed by a senior engineer from Head Office and carried through by the Second Engineer.

Perhaps the most significant demonstration of mutual trust were the informal agreements of which the Makeup Agreement (see next section) is the outstanding example. When this was first proposed by the union officials, management were somewhat wary but once the idea had been worked through and discussed with everyone affected, the proposal was tried out with great success. This agreement was an important factor in ensuring the success of the change process and its success encouraged the further growth of mutual trust and confidence. Another significant indicator of the level of trust was that Plant 1 had its own plant agreement and the employees were not covered by the National Meatworkers Award. This was negotiated under the provisions of the Labour Relations Act, 1987, which allowed employees to cite themselves out of the award and negotiate an Enterprise Agreement. This meant that any employees covered by such an agreement could no longer shelter under the collective strength of a national award and thereby forgo the chance to greatly increase the leverage available to them in the form of a national strike in any wage bargaining. The few work sites that opted for this had to feel confident that they could trust their management and this was certainly the case for Plant 1. The benefit of this for the plant was that they did not have to become involved in company and nation wide strikes, which at that time occurred frequently in the meat industry (see for example Plant 3).

The level of trust at Plant 1 engendered an atmosphere which both encouraged delegation and encouraged people to use their own initiative and also enabled staff to

engage in sometimes heated disputes with senior management in the confidence that grudges would not be held or recrimination visited upon them later.

6.3.2 *Integration*

This construct is largely composed of informal communications and informal problem solving. At Plant 1 there were many examples of this kind of phenomenon. Employees at all levels were encouraged to solve problems quickly and informally and Plant 1 had the highest frequencies for these factors at 72 (8.1%)[4] for informal communications and 29 (3.29%) for informal problem solving.

A major problem in meat plants is to keep the gap between actual and potential production numbers as small as possible. Management's open approach and policy of pushing responsibility downwards, but most of all the degree of trust that existed, encouraged the butchers themselves to come up with a mechanism for ensuring full tally with less breakdowns. This was what became known as the "Makeup Agreement". This was an agreement that incorporated the simple idea that as soon as full tally was achieved on any day, the mutton complex staff could all go home. This meant in practice that people could get away up to an hour and a half early. This simple scheme proved to be not only a powerful tool for ensuring a very high average daily tally (98.8% of potential) but also for motivating everyone on the mutton floor, including supervisors, fitters and Ministry of Agriculture and Fisheries (MAF) inspectors to work together. This was a real win/win concept and everyone liked it. A fitter explained that the agreement meant

> **"We no longer have to spend hours each day repairing things. Before this scheme they [butchers] didn't care if it stopped or not - they even caused it**

[4] This is a statistic generated by the Nudist software and denotes the percentage of coded statements which refer to the particualr item of interest.

sometimes. Now they don't pull any stunts - it's not in their interests because they want to keep the chain going and to do this they need us."

The deliberate sabotage of machines was confirmed by some of the butchers who referred to "ghost breakdowns" occurring in the past. Some of the men also became bored or careless and breakdowns would occur. Likewise the MAF inspector had a lot of power to slow things down by being unnecessarily meticulous in deciding what was good and bad. If the inspector felt aggrieved about anything then he could make it much harder to reach tally and could make things look bad for the butchers and supervisors. They are employed by Ministry of Agriculture and Fisheries and by necessity have to be free to do their work without interference from the company. I saw many instances in the other plants studied - particularly Plant 4 - where there was almost open warfare between Ministry of Agriculture and Fisheries inspectors and supervisors. The situation at Plant 1 was never as bad as that but nevertheless the inspectors had been known to exert their authority a little over zealously in the past, interpreting the standard regulations by the book. Inspectors mark carcases with defects, showing pieces that have to be trimmed off. Each carcase so marked is tagged and sent onto the "detain rail" where labourers trim the condemned portions off. If the inspectors consign a high proportion to the detain rail, it can quickly become full. This in turn causes the chain to stop as no more carcases can get onto the detain area and the technology dictates that work is carried out in a strictly sequential manner. When this situation arises production staff quickly become frustrated and angry. The inspectors all carry sterile knives so they can better examine underlying portions of the carcase. So it is possible for them to trim much of the small defects off the carcases themselves as they carry out their inspection. This had not been done

previously as this was not part of their job and they were forbidden by protocol from doing it.

Under the new agreement at Plant 1 the Ministry of Agriculture and Fisheries inspectors co-operated completely and would often lend a hand with trimming when the detain rail became over full and threatened to stop the chain. I observed one instance where the hide puller broke down. People had to be moved from the detain rail to help pull the hides manually. This meant that with trimmers missing from the detain area, carcases marked for trimming by the inspectors would pile up and quickly bring the chain to a halt. In many plants this would only be seen as a problem for the Production Manager. The butchers wouldn't care if the chain was stopped - it meant they got a break. Supervisors would see this as a technical problem for which they were not responsible and therefore could not be held liable. This sort of situation is typical of the traditional command and control system with fragmentation of responsibility I observed at the other plants.

At Plant 1 when the hide puller broke down, the Ministry of Agriculture and Fisheries inspector immediately started trimming carcases himself to alleviate the strain on the detain system. Butchers, supervisors and maintenance engineers all worked together to clear the problem with the hide puller and they succeeded in doing so in around fifteen minutes. In the lunch break following this incident, the butchers and engineers talked through the problem and discussed ways of avoiding further recurrence. This kind of concerted action was not seen at any of the other plants. Rather, the opposite tended to prevail, with different categories of employees segregating themselves in self preserving groups both on the job and in lunch and tea

breaks. At Plant 1 any problem was regarded as a shared problem belonging to all of them and they set about sorting it out in the most optimal manner.

The Makeup Agreement was not written down and made into an official, legally enforceable document. This kind of agreement is not uncommon at the plant. As one foreman put it,

> **"Not all of our agreements get written down. There's a lot of this sort of thing - we trust each other. It took a long time to build this up."**

Plant 1, like many such organisations, had made extensive use of memos for communicating advice and directives through the plant. When the new GM first arrived and took stock of the situation at Plant 1, he decided that these memos rather than facilitating communications, actually achieved then opposite. He instituted a rule that from that moment memos were not to be used. "If you have something to say, either say it face to face or get on the phone." This simple rule meant that suddenly people had to communicate directly with each other and this allowed people to make sure their message had got through and to be able to check that it was understood and receive feedback.

I witnessed a great deal of informal communication happening in the different "smoko" rooms where people gathered for tea and lunch breaks. One would expect there to be informal communication in such a setting but at Plant 1, while there was a lot of ordinary chatter, there was also a lot of "shop" talk, especially when there was some kind of problem. The atmosphere was light and open and, unlike the exclusivity of the other plants, people from different sections and groups would drop into each other's smoko rooms to chat.

The GM would make a point of walking through the MSH almost every day. He would stop and talk to people, offer encouragement, ask them how they were,

how the chains were running and even about their families. He felt that this was the only way he could really "keep his feet on the ground" and let the staff see that he was concerned about them and what they did and that what they did was important. He felt that it was too easy to become focused on the "big picture" and forget the really important aspect of the actual operations themselves and the people working on them. The GM also had short, twice weekly meetings with senior supervisors from each area of the plant. I attended one of these between the GM and senior production staff where a problem was discussed with pelt damage caused by the new pullers. After discussing this for five minutes, the GM called in the fitters supervisor and the butchers delegate. The discussion went on for another ten minutes with various options being explored. They all then went off to the MSH to talk about it there and see if they could contribute to solving the problem. I was told that this was nothing out of the ordinary and was quite a normal procedure.

The Chief Engineer would also wander around the plant visiting his tradespeople as they worked on their various tasks and would have lunch or tea with either his own staff or with the production people. He would also turn up in the MSH if there was a serious stoppage during the trial to see if he could be of any assistance.

The Chief Engineer mentioned that sometimes the fitters became a little resentful and felt they were regarded as "dogs bodies". He saw this as a natural outcome of their role, especially during the trial period when they were often called in to deal with adjustments. His method for countering this was to make sure he saw them working as often as possible and give them support and encouragement. He would also order beers for them from time to time when they had successfully completed a difficult job. The GM would also drop in to see them working and talk to

them from time to time. I found very few negative attitudes among the tradespeople, even when I prompted them about the "dogsbody" problem. They admitted that they did sometimes become resentful but most felt that they had a really good job and they like to work there.

The GM felt it was essential to keep people informed about what was going on, and as far as possible this should be done informally, not through notices and plant newsletters. Informality even extended to meetings between the union and management about such things as manning, allowance problems and so on. At such meetings at other plants, verbatim minutes would be taken by a secretary and these would be typed up and circulated afterwards. There would often then be a heated debate over whether something had really been expressed in such a way or whether this was the true content of what went on. At Plant 1, there was no formal recording of proceedings. A note would be made of any conclusions reached, and agreed to on the spot. Often it would be one of the union delegates who would carry out this responsibility. This was possible because they trusted each other and all wanted to reach agreement.

The GM saw himself as someone who was there to make sure everyone else could do their job properly. All he had to do was make sure they had the resources and training and then they had the capability to do their jobs. This attitude was encouraged in all the managers and they appreciated the fact that the GM trusted them to do their work and would support them when they needed help or training. He felt that ultimately the success of the plant depended not on how clever he was but on the efforts of all the people working there. It was up to him to instil the right sort of attitudes in people through example. He saw this as being one of management's

primary responsibility and he tried to ensure that this approach filtered down through the organisation.

6.3.3 *Empowerment*

Supervisory staff at Plant 1 were empowered to make whatever decisions were necessary to ensure smooth operation. Production problems on the chain were usually sorted out where they occurred by the personnel involved. There were official channels through which problems and solutions could be routed but these were reserved for the few intractable situations that could not be dealt with except at a higher level. These situations were not usually technical problems but ones concerning labour relations. For instance, sometimes a butcher or labourer may need to be disciplined because of a "final warning" type offence such as fighting. This would have to go through the official discipline process as laid out in the official Plant Agreement. But these situations were rare.

Union delegates could only recall one or two such incidents in the last few years. Most problems of this nature were resolved by the union delegates and the supervisors quickly and equitably. The delegates would seek to protect their members from any unfair treatment but they did not tolerate any of the kind of industrial sabotage and disruptive tactics common at other plants. They themselves would discipline their members guilty of disruptive behaviour through a process of warnings. This was fully backed by the other members and delegates did not suffer from the "meat in the sandwich" syndrome common in many industrial plants. This is where delegates would be criticised by management for being difficult and intransigent and also by their members for not being tough enough with management.

The Senior Production Supervisor told me he that his experience at other plants did not prepare him for what he found at Plant 1 when he arrived:

> **" It amazed me how much involvement the workers had in what could be termed company policy issues. This is largely due to [the GM's] attitude."**

Generally, when a production problem occurred, whoever had the requisite knowledge lent a hand and others worked in around this to get the system running normally again. Fitters would be called in and they would work with butchers and supervisors to solve the problem. If the problem was serious, the Second Engineer and the Chief Engineer would come along. The hide pullers were the machines that gave most problems, especially during the trial as they were the most sensitive to variations in the quality of the skins. Whenever there was a breakdown or malfunction spare butchers would step in to assist the men working the hide pullers to carry out the work in the old way, by hand. In this way the chain could often be kept running while the repairs or adjustments were carried out.

This was very different from the other plants where I observed that breakdowns were welcomed by the people working on the chain and viewed as an opportunity to go outside and take a break.

In an industry with a generally high accident record, Plant 1 had a very good safety record, well above average for the company. There was a Safety Officer who first trained staff in safety techniques and protocol and then made them responsible for their own safety. He felt that:

> **"Only they can really make any difference - it's really their job to look after their own safety."**

For staff recovering from injury, the Safety Officer had instituted a scheme where the employee would carry out alternative work on full pay until the injury was healed. This meant that butchers who cut themselves badly would not have to spend weeks on accident compensation, where they receive a lot less money. Instead they would carry out light, simple jobs that would not aggravate the injuries. This was a real advantage for those unfortunate enough to injure themselves at work - and also away from work - but at the last plant that the Safety Officer had been at, it took nine months to implement the scheme because of suspicion from both union and management. At Plant 1 it took three weeks.

The level of delegation meant that butchers were able to work out their own rotation and manning routines themselves. There were two "rovers" - experienced butchers able to carry out any of the tasks proficiently - and they were used to allow people on the toughest jobs to have a break or to visit the toilets by replacing them for ten minutes at a time. Butchers would also rotate through different tasks in patterns that suited them and their needs. This system was also used to "cover' for anyone who was a little ill - not sick enough to go home but not up to working as hard as usual. The other butchers would work a little harder to make up for the shortfall. This and the fact that the butchers would often discipline their own peers meant that, in the words of the chain supervisor:

> **"Supervisors no longer have to spend their time being policemen and working out manning schedules. They do it all themselves. This means we can concentrate on dealing with the more important - and more interesting stuff."**

He confirmed that the butchers sorted out their own rotation routines and felt they did this well. He felt rotation was beneficial because not only did it allow the

butchers to get a break from the more difficult jobs but they also became multi skilled and more flexible. However he maintained that there were a couple of butchers on the chain who were "not much good at anything" but the others covered for them. He didn't mind how they managed the process as long as quality and quantity were maintained. One senior butcher who had been asked if he was interested in training to become a supervisor said:

> **"The main thing that would stop me doing this normally is the problem of making the tradition from being one of the blokes to being the boss. But it would be a lot easier here because the supervisors don't have to much in the way of ordering people around. We do most of this ourselves."**

As we have seen, the union officials at the plant enjoyed a great deal of autonomy from the regional union officials who were regarded as, for the most part, an interference in their affairs. They ran union affairs in a manner which suited the needs of their members in the plant and were not interested in regional or national issues or strategies. They knew from past experience that participation in the wider union affairs would bring about a drastic reduction in the degree of autonomy they enjoyed in their daily work lives.

The focus of this study is on the MSH in each plant but at Plant 1 there were ramifications of the butchers' approach to union affairs and daily management for other areas. The casings department processes sheeps' intestines for high grade sausage skins which are a valuable source of revenue. They were trialling a new method for the processing and the delegate in there was being obstructive and unhelpful. Rather than trying to use the power they has as managers, the Production Manager asked the butchers' delegate to go and talk to the delegate from the casings department. After a thirty minute meeting, the casings delegate was persuaded that

his approach was not going to help anyone and that there were better ways of working through teething problems. This action was supported by the union Secretary and President as well as by the employees in the casings department. The trialling of the new method went much more smoothly from that time.

The MAF inspectors on the chain also worked out their own rotation system so that they could get regular breaks from the chain. They worked this out themselves and their Supervisor was quite happy to allow this as long as quality was not compromised. Technical staff such as fitters and electricians expressed satisfaction with the level of training they received and that they were allowed to get on with their work without any "bullshit" from their bosses. They all received both off and on site training in the required technical aspects of the new systems and were able to go on regular training courses to keep up with technical developments in their fields, paid for by the plant.

There were high levels of consultation regarding all aspects of the new systems. A trial rig was set up and engineers, fitters, supervisors and butchers worked together to design the correct spacing and positioning of stations on the chain and ancillary equipment. During the trial period and after, this consultation continued as everyone worked together to facilitate the smooth working of the new system.

All supervisors, administration staff and management staff went on weekend team building course three times a year. These were run by the GM himself and were designed to train people in conflict resolution and problem solving as well as building morale and inter-relationships between functions and departments. Most of the comments about this I heard were positive and staff looked forward to it. There were

plans to extend this to the meat workers themselves but this still had not eventuated by the time the study ended.

A combination of delegation, consultation, mutual respect and training contributed to the observed high levels of empowerment among all staff in the MSH at Plant 1. Although other parts of the plant were not part of this study, I gained the impression that this regime pertained throughout most of the plant, although it is likely that it was most highly developed in the MSH.

6.3.4 *Ownership*

One of the first, strong impressions on entering into a dialogue with the people at Plant 1 and observing them at work was the feeling of ownership expressed in different ways by people at all levels. This feeling of ownership was enhanced by the *shared* feeling of ownership - the feeling that they were all part of the same team, whatever function they carried out. Most of the staff in the whole plant came from the surrounding area and knew each other well, if only by reputation or indirect relation. The staff also take a real pride in their plant and in their ability to produce excellent results. These initial impressions were confirmed by the high frequency of expressions of ownership expressed by different staff.

One butcher who had experienced working at another plant had this to say:

> **"Compared to [other plant] Plant 1 is like a family home. At [other plant] it was all them and us kind of management. If they could put the boot into us they would. They didn't understand what negotiation meant."**

The alienation and division between management and workers was largely absent at Plant 1. There was none of the posturing common at other plants, where delegates and management engaged in the "ritual dance" of conflict as they tried to

impress their constituents. One grizzled old butcher, veteran of many conflicts from the past at different plants said:

"Everyone is involved - we need each other - management and workers."

Other comments demonstrated the sense of responsibility many felt for the plant when he commented:

"Relationships are pretty good here - there's a lot of give and take. This kind of atmosphere is up to us - all of us - we make it good or bad."

And another butcher, talking about job rotation:

"There's a lot of money tied up in this operation so we want to make sure it goes as well as it can. We arrange this ourselves, the supervisor knows we won't abuse the system as it lets everyone down if we do - mostly ourselves."

These feelings of ownership and pride are nurtured and fostered by the style of the GM and the Production Manager. The plant runs on what are essentially unwritten and unofficial rules and guidelines. As the Production Manager commented:

"We all know the rules here. I suppose there are official rules and unofficial rules. Basically to make the place run well you have to work in together. If you play by the official rules all the time things get bogged down. So we have worked our easier ways of doing things. I trust the guys to not abuse the system and they trust us not to. So it works well most of the time."

As well as a strong team feeling for the whole plant exhibited by most of the people there, different groups had their own team feeling. For example there was a strong feeling of camaraderie evident between the management staff members. They would stand in for each other, lend a hand in cases where they may have more

experience of a particular case and generally give advice, listen to each other and discuss problems.

The more experienced would coach the less experienced and newer members of the team. This team spirit was encouraged and strengthened by team building weekends run by the Production Manager which I did not witness but were reported to me as being very useful and a lot of fun.

The engineers also enjoyed a strong team spirit among themselves and here again I witnessed more experienced engineers assisting, and coaching newer members of the team. They would regularly review problems they had, as they occurred, with each other. This was particularly important during the installation and trial period for the new technology as the engineers had to work closely with both each other, production managers and production personnel to confront and find solutions to novel problems and situations.

The butchers and labourers on the chain, in common with the other plants in the study, had a strong sense of cohesion and solidarity. Conflict with senior managers did occur from time to time as outlined above but these incidents were few and were quickly settled with little ill feeling.

In addition to light duties on full pay for injured employees, the GM told me that he would also help individuals out with financial problems from time to time with loans that were paid back through the wages. The men would come to see him if they had other serious problems such as an impending divorce and he could offer understanding and support and would recommend a counsellor if necessary. This was

confirmed by several of the staff from the chain and they said it was good to know that the GM cared about them if they were in trouble.

When the GM was sent by the company to look after another plant for a month because the GM there had a heart attack, many of the staff were worried that he wouldn't come back and were very relieved when he did. Staff at all levels also expressed great pride in the plant and would quote praise given by visitors and felt that they were one of the most efficient plants in the world.

Strong feelings of ownership and of being one team contributed to the success of Plant 1. These feelings interacted with and were strengthened by the other factors of trust, empowerment and integration.

6.4 *Industrial Relations*

At first some of the men thought the new system would never work but once they had experienced it at first hand under operational conditions, the reaction of the men to the new technology was positive. they knew that the old chain needed replacing and the heavy jobs like hide pulling and punching were now carried out by a machine. The following was a typical response from the butchers:

> **"The work is now much easier. Before no-one could last past fifty years old on the chain. Now we can make it to sixty easily - if you're fit. There used to be really heavy jobs like punching the skins - guys would have huge swollen knuckles. There were no fat butchers."**

As well as the Makeup Agreement referred to above, the plant had its own registered agreement separate from the Award under which the rest of the company's plants worked. This had been in place since 1979 when Plant 1 first became licensed

for export. Prior to this there had been frequent, short strikes usually over the unhygienic conditions in canteens and changing rooms of the old buildings.

A frequent cause of disputes before the buildings began to be upgraded were the bad conditions in the plant. Once the plant started to be upgraded for export, conditions improved and this cause of conflict disappeared. However, from time to time disputes did arise between the freezing workers and management but these rarely resulted in a breakdown in relations. Strikes and other overt manifestations of conflict occurred usually when the regional or national union called for a collective show of strength. But in 1991 there was a company-wide six-week strike over redundancy which Plant 1 did not take part in as they already had a plant redundancy agreement as part of their plant agreement. However they did agree to accept whatever redundancy package was arrived at through the strike by the other plants.

This kind of situation reflects the ambivalent attitude the plant workers have towards the national union. In general they felt that Plant 1 was their plant and they could look after themselves very well. They did not welcome interference from outside. Freezing workers union plant officials and delegates felt that they had little in common with the National Union. As one plant official commented:

"Our [National] union seems to have lost direction and leadership at the top. .....But they [national union leadership] don't like us anyway - or at least that's the impression they give."

One Regional Union official interviewed had a wider perspective of agreements reached at Plant 1 and expressed anxiety that these kind of stand alone and unwritten agreements could backfire on the rest of the company plants. He was also suspicious of Plant 1 management intentions:

"The informal agreement at Plant 1 worries us a bit. This is the sort of thing that management will suddenly turn around on you so that the mutual gain becomes just their gain. You end up killing more but don't get home early."

This view was based on many years hard experience of confrontation and mistrust between management and the freezing workers union and as such is not to be dismissed lightly as typical union griping. This makes the achievements in building trust at Plant 1 all the more remarkable. At no time did management at Plant 1 attempt to take advantage of such unwritten agreements or the fact that plant employees had elected to separate themselves from the collective protection of the national award.

The two larger plants studied both had full time freezing worker union officials, paid by the company who spent their time looking after the interests of their members. For the most part they performed a valuable service in acting as a filter for the more trivial and outrageous worker complaints. They are usually people with long experience in union affairs and the industry and know what is possible. But the situation with full time officials can become dysfunctional. As one plant freezing worker union delegate put it who had previously worked at a bigger plant, since closed down:

"At bigger sheds you get paid union officials who do nothing but trade union stuff and then you can get power struggles. This causes trouble on the floor as people try to prove how big they are."

This is exactly the kind of situation which developed at Plant 4 and which made a large contribution to the difficulties first encountered with the new technology. At Plant 1 the freezing worker union officials were allowed one morning off every two weeks to meet together. Most of their work was dealt with informally and as part of their ongoing activities as employees, in the normal course of the day. Because of

the high levels of co-operation and trust and informality of procedures this was all that seen as necessary.

6.5. *The Change Process*

6.5.1 *Preparations For The Change*

> **"This is a people exercise - we spell it out to the troops. We get as much input (from them) as is practical. They were not against this change because they knew this was our only chance of survival. We try to let everyone know what's happening - why it's happening. We don't keep things hidden here. We do a lot of talking to each other. In general we think we do well and our people are part of this - we're a team here." General Manager.**

The General Manager and the Plant Manager alerted the union delegates and plant officials to the planned changes almost a year before installation. The first reaction from the union members was "It won't work." They doubted that the new system would be able to stand up under the rigours of actual full speed production conditions. They had heard stories coming from the experimental chain at Lorneville about the problems there and they were apprehensive about the effect failure would have on the already financially crippled plant. The employees were also worried about loss of wages and jobs resulting from the labour saving and deskilling aspects of the new technology.

A plane was chartered and a selection of engineering and production staff, union delegates and managers flew to Nelson for two days to look at the system installed in a plant there.

Two months before installation the plant union officials and delegates received official written notification of the installation and negotiations began. This was a fairly straightforward process. The GM addressed the main fears of the delegates and officials and assured them that they would receive full rates of pay until the system

was up and running and that there would be no redundancies except voluntary ones and by attrition. The union delegates wanted more men on the chain than was proposed but the GM held out for 40 butchers and told them more would be put on if it was necessary.

The final number of butchers was thirty seven plus three spares, down from forty nine and the labourers were down from forty two to thirty four. The butchers' daily wage increased by 6% and the labourers' daily wage increased by 5%, while the chain speed increased 35%. The 1986/87 season was a good one for Plant 1 and the total annual kill of mutton increased by 50%.

6.5.2 *Training*

The General Manager chartered an aircraft and key butchers and delegates were flown to another plant where the new chains were running. They spent two days there and were able to see the new hardware at first hand to get some "hands on" experience with it and talk to their peers at the plant about their experiences with the new technology.

A trial rig was also set up at the plant in a spare space so that the engineers could sort out heights, spacing of machinery on the chain and position of ancillary hardware such as washers. This was carried out with butchers and labourers trying out the new configurations, recommending changes in an iterative fashion so that when the system was finally installed there would be as few problems as possible. This also gave the people who were to work this system feelings of ownership and satisfaction at being consulted and their input acted on.

Supervisors and more senior managers, as well as receiving the industry sponsored supervision training, went through experiential team building weekends run by the GM himself. These weekends away together were reported as being of great benefit to the way they worked together and there was perceived to be a direct transfer of learned skills and attitudes to the actual jobs.

6.5.3 *Installation*

The Chief Engineer at the plant had no experience of the new technology or of large projects and so the change was co-ordinated by a Special Projects Engineer from Head Office who had considerable experience in projects of this sort. Milmech built the hardware and installed it under the directions of the Project Engineer. A Project Team which was set up with representatives from all the affected areas, engineering, electrical, and production, according to people on the team, worked well.

Fitters who were destined to work on the new hardware were able to go and see it operating and receive training in how it worked. They were flown in the chartered aircraft with production staff to see the new technology actually working. They spent several days at the other plant and were able to talk to engineers there and find out exactly how it worked, what the potential problems were and so on.

The old chains needed a great deal of maintenance and were, in the words of the General Manager, "old, greasy, covered in flaking paint and seemed to spend more time in pieces on the ground than operating." The new machinery needed much less maintenance so less fitters were needed and the engineering staff was cut by three. This was done by voluntary redundancy and the Engineers Union did not object.

Relations between the technical staff at different levels were very relaxed and open. Both the Chief Engineer and the Second Engineer had come up through the ranks of apprenticeship and later qualification as engineers rather than the path of university engineering degree. The engineers were proud of their practical experience and expertise and their attitude towards university trained engineers was dismissive. As one of the engineers put it,

"I've worked with these guys in the past. Some of them didn't know one end of a spanner from the other - couldn't do anything practical."

This trade training background gave these senior engineers a more practical approach to problems and also enabled them to better understand the difficulties and constraints of the tasks their fitters and electricians had to do. The Chief and Second Engineer would often join the fitters and electricians in their canteen for "smoko". Problems were discussed informally, upcoming work previewed and the relationships fostered and maintained.

The Chief Engineer and Second Engineer also used the canteen where other senior staff and office staff had their coffee and lunch breaks. The General Manager would usually attend coffee breaks and the atmosphere was very relaxed and informal. Playing darts was the main activity but work problems would often come up, advice sought, and solutions found. The Assistant Manager reported that they had a lot of informal meetings in the canteen and elsewhere and I witnessed many such exchanges. There appeared to be very little territoriality exhibited by staff. Most employees seemed happy to work in together, sharing the problems and solutions. This contrasted sharply with the other plants where staff from the different occupational, functional and hierarchal areas tended to congregate with each other. This was

particularly true at the larger plants where open animosity or, at best, total indifference was the norm.

6.6 *Summary*

Plant 1 was a relatively small plant with a history and tradition of being a local facility and not part of a larger organisation. A series of poor managers had seen the plant run down to the point where it had become bankrupt. A larger company, which was also the main creditor, decided to take over the operation of the plant and try to turn the situation around. rather than simply foreclosing. A new GM was brought in to assess the situation and he decided to try the new technology becoming available. Staff at the plant knew that this was the only chance they had to keep the plant open and so they had a strong incentive to make the new system work.

All the plants in the study were threatened with the possibility of closure as they witnessed plants all over the country being shut down as restructuring took its toll. But the results were not always the same as at Plant 1. A combination of a crisis situation, small size, strong feelings of ownership, excellent interpersonal skills of both the GM and the PM and resulting policies of informal communication, problem solving and delegation were the main contributors to the success of Plant 1.

The behaviour and style of both the old and new GMs were the driving force behind the culture of trust and teamwork that characterised Plant 1. Trust and teamwork were built through consultation, participation, delegation, empowerment and training. The underlying value was respect for people.

Chapter 7: Case Study of Plant 2

7.1 *Background*

Plant 2 was situated just outside a medium sized town with a population of 30,000 set in a prosperous farming area. For many years Plant 2, like Plant 1, had been a local abattoir run by the local council, catering to the local trade. A large meat processing company acquired the plant in 1971 and in 1972 a limited licence to export was granted with a full licence in 1978. In that year the owners were themselves merged into a larger group with diversified interests in the agricultural sector. In 1986 a further merger occurred with a medium sized meat processing company in a 50/50 split. The new company had four plants in the North Island, two of which (Plants 2 and 4) make up part of this study. As a group the company had an estimated 10% share of the total NZ sheep kill, the majority of this from Plant 4 (80%). In 1988, as a result of the 1987 stock market crash, one half of the group collapsed, leaving the meat processing company in possession of the four plants.

Like Plant 1, Plant 2 is a small plant having a single lamb killing chain with a capacity of 4200 per day. Total staff at the plant is 497 with 355 of these being in the freezing workers union. As with Plant 1 many of the staff have known each other for years and socialise outside work. However, unlike at Plant 1, there was little indication that the butchers felt the same kind of ownership of the plant and the processes they were working on. Plant 2 had undergone the same rapid sequence of ownership changes as Plant 1 but the difference lay in the degree of autonomy allowed to the new General Manager and the immediate urgency of the need to do something to save the organisation that was experienced at Plant 1. Plant 2 was not in the

desperate situation that Plant 1 was, although staff were a little traumatised by the succession of ownership changes and the general state of the industry which was undergoing restructuring caused by overcapacity. In fact no plant was safe and all were anxious about their future.

Traditionally Plant 2 had a very good record of industrial relations in the MSH (mutton slaughter house). The butchers and supervisors, as at Plant 1, knew each other and came from the same, small locality and there were few major strikes. Unfortunately, just at the time of the installation, the regional union had called a strike across all the company plants on the issue of redundancy agreements. This resulted in an eight week delay to the start of the season and to the manning of the new system. As the strike finished, negotiations over the layoffs, pay and manning of the new system began. The eight week strike had highlighted the fears of the staff about redundancy caused both by restructuring and by new technology and the regional union negotiators were anxious to make sure they wrested as good a deal as possible from the company. For this formerly relatively peaceful plant the prognosis was not good for an easy settlement.

7.2. *Success Measures*

Plant 2 took 2.37 years to pay back the original investment in the new system. This made it the second best plant in the study but it was still considerably more than the original estimate by the managers of between 12 and 18 months. However, Plant 2 had an advantage over the other plants in the study because they had introduced the inverted system prior to the previous season and the butchers had had time to get used to this before the installation of the semi-automatic machinery such as the hide

pullers. The investment Plant 2 made in the new machinery was only $2 million, the figure on which the payback time is formulated, compared to $5 million for Plant 1. This is because Plant 2 already had a new building in which to install the machinery whereas Plant 1 had to invest in a whole new building as well as the machinery. These factors, together with its relatively small size should have allowed it to perform a lot better than it did.

Plant 2 also took three months to achieve full speed on the chain, a month longer than Plant 1 but considerably better than either Plants 3 or 4. We will explore why Plant 2 performed so badly below.

7.3 *Construct Factors Contributing to Performance*

7.3.1 *Trust*

On my entering the plant and beginning to talk to staff at different levels, an almost palpable, negative atmosphere and attitude was discernible. There was a distinct lack of trust expressed on all sides, as a perusal of the construct frequency table (Table 3.2) reveals. The butchers did not trust the managers and the managers did not trust the butchers.

This atmosphere of mistrust was a major factor in bogging down the negotiations over the new technology. The regional union officers who conducted the negotiations on behalf of the butchers were convinced that the company was using new technology to "break the union" and that the company was working to a larger plan to extend this company wide. The union sent a memo round to their members at the plant saying that the outcome of these negotiations could have "serious repercussions for all butchers in the province." And went on to warn of "the type of industrial manager they were having pushed on them, and if they thought that past

negotiations were tough then they were in for a rude awakening." But the chief union negotiator maintained that this lack of trust had not always been the case. "One reason why [Plant 2] was so successful in the past was because the union trusted them. But not with these new owners."

At Plant 1 the negotiations passed with no more than a series of bargaining rounds, with each side compromising to reach agreement. Although they did have a negotiator from their regional union present, the butcher delegates from the plant and plant management maintained firm control of the proceedings.

There is no doubt that the negotiations at Plant 2 were made more difficult with the presence of negotiators for both the union and the company with larger agendas and negative attitudes exacerbated by the recently finished and bitter strike.

The butchers generally expressed confidence in the technical ability of the MSH Supervisor but had ambivalent feelings about him. The butchers took pride in the fact that they were told that theirs was the most efficient chain in New Zealand (before the new system) but felt they received no recognition for their part in this. As one of them commented:

> **"[The MSH Supervisor] thinks its all because he's so good. And he *is* good at his job - he really knows how it all works. You can't pull a fast one on him easily. But it means if we're efficient the place stays open which is important for us and the town. But we get no recognition for our contribution, nothing would happen without us. "**

The butchers also had ambivalent feelings about the company for similar reasons. They were pleased that so much money was being invested in the plant (there was also investment in the boning room and in the freezing area) as they felt this was an indication that the company would not close down the plant. But as outlined above they were also suspicious of the motives and agenda of the company.

They did not trust the GM who had replaced a much admired predecessor. The previous GM had been there for over five years and would come and talk to them and fight to get resources to keep the plant operating. They described him as "his own man" who put the plant and them first, even risking his job. They saw his demise as sign that the company wanted a more compliant "company man" running the plant. The current GM was seen as a mere puppet for head office with no real autonomy and with no allegiance to them or the plant. As one butcher expressed it:

> **"We trusted the old manager - he looked after us and the plant. But now [the GM] is just an office boy for head office. He doesn't care about us at all - he's a company man and cares about his career and the company, not the plant."**

The MSH Supervisor perceived himself to be a very technically competent person but he had little respect either for his immediate superior, the Production Manager, or for the GM. He felt unappreciated and complained bitterly because he had received no expected pay rise for over a year with no explanation. With the removal of two layers of management between himself and the GM in an attempt to achieve more organisational efficiency and cut costs, the MSH Supervisor was able to run the MSH as he saw fit and managed to intimidate the Production Manager sufficiently so that he neither visited the MSH nor interfered in or queried any decision the supervisor made. He had little respect for the abilities of either the GM or the Production Manager. He himself had risen through the ranks whereas neither of his two superiors had, both of them coming up through the technical side of the industry.

7.3.2 *Integration*

Notwithstanding the low levels of trust, there was a degree of integration through informal problem solving and communication. The Chief Engineer was respected by the butchers and he was able to work with them in setting up the trial system, adjusting spacing and positioning and so on. The fitters, too, worked well with the MSH Supervisor and his assistant but the butchers' relations with the fitters was still a little strained for reasons outlined below even at the end of the trial period. But it was the Chief Engineer and his inclusive, open approach which ensured that the new system was eventually running properly. Like the engineers at Plant 1, he had come up through a trade certificate and apprenticeship rather than a university degree. He described himself in this way:

> **"I'm a hands-on engineer - I put the stuff in as we want it rather than some fancy engineering solution. I find out how the people using it want it."**

However, I witnessed several incidents where there was a breakdown of one of the semi-automated machines and the butchers rendered no assistance at all. Indeed a group of butchers hinted that they could easily have prevented the breakdown and assisted in solving the problem but they simply did not want to. On two occasions I saw a breakdown occur, the chain was stopped and all the butchers immediately went outside and started playing cricket. The chain was stopped for 25 minutes in one of these incidents.

The MAF inspectors tended to keep to themselves and perform their tasks according to the official rules, unlike their counterparts at Plant 1. They reported that they:

> **"Get on all right with [MSH Supervisor] but he starts shouting if there's a problem with the detain rail overloading because we've been marking down too many carcases. He then comes and puts pressure on us to clear it which we don't like at all. He hates the fact that we are not under his control. If he gets too obnoxious we "work to rule" and the whole chain slows down and eventually might have to stop. He really goes mad then and complains to our boss and sulks."**

This is a very good example of how closely following "the book" and official rules often means that the system fails to work in an optimal fashion. Informal and unofficial processes as pertained at Plant 1 seem essential for the efficient functioning of the system.

In general the MSH Supervisor was authoritarian and uncompromising in his approach to people management. As we have seen above, supervision in the MSH was very technically competent but left something to be desired on the human interaction side. The plant has a Training Officer and a training budget and the supervisor had been on supervisory training courses but he considered these to be largely a waste of time, especially the aspects dealing with the supervisor as coach, counsellor and motivator.

> **"I've been on a couple of courses but for the most part they're all bullshit. They talk about motivating the workers, job satisfaction and helping them with their troubles at home....The fact is there is no job satisfaction at all in this job. They're on set rates and speeds - they've got no control. The only thing that makes them happy is to leave them alone."**

He sees trying to motivate butchers as pointless because the work is so boring. All they have to do is stand there all day and do their job the required number of times while plugged into music delivered through headphones. Butchers spoken to confirmed the feelings of their supervisor. The work was very boring and had become

more so now that the chain speed was faster and easier with the new technology. Butchers doing gutting were able to rotate around the tasks but other butchers did not. Labourers were able to change round jobs every two weeks. They maintained that it was the money that kept them there. Butchers at Plants 1 and 4 did not complain about the boredom to such an extent. They were able to alleviate the boredom of the job through informal arrangements for relieving each other, singing, talking and playing jokes on each other (and on visitors to the chain). But the Supervisor allowed no such "skylarking" and the chain at Plant 2 was striking in the passivity of the butchers as they worked. (See below 3.3 Empowerment for a further description of this).

The Supervisor maintained that the new technology introduction was successful and attributed this to his own abilities and that the butchers were mainly young and because of the history of relatively harmonious industrial relations. He felt that the initial bad start was caused by the union officials from outside the plant coming in and stirring the butchers up because of the strike situation they had just come out of.

Although there were instances of informal communication and problem solving, much of the potentially powerful effect that these processes may have was lost through the effects of the strict and autocratic rule of the Supervisor.

7.3.3 *Empowerment*

While the MSH Supervisor had a great deal of delegated power, the degree of empowerment allowed to the butchers and labourers was very low. The supervisor's

style of supervision in the was directive and authoritarian. In the words of one butcher:

> **"The supervisor treats us like kids. We have to hold our hand up and ask to go the toilet. We're not allowed to lark around at all. He has favourites and sacks people for doing anything out of line - unless it's one of the old hands. There'd be too much trouble from us if he tried that on."**

This last comment is an indication of how the butchers' seniority system affects their thinking and actions. Although they are likely to resist *any* of their members being dismissed for what they consdier to be petty offences, they tolerate it much more readily if it is someone lower down on the seniority scale. But they are prepared to strongly resist any of the old hands being treated in a similar fashion. This is one of the peculiarities I observed in all the plants except Plant 1. Although there was much talk of solidarity among the butchers, there was a distinct hierarchy among them which affected the manner in which they would react to perceived provocation n the part of managers and supervisors. This hierarchy was governed by the seniority system and showed itself in various ways. Those butchers who had been there the longest dominated the union positions and they made sure their interests were protected as much as possible, even at the expense of butchers lower down on the seniority list. I shall return to this matter when we examine Plant 3.

The layout of the chain Plant 2 was different from all the others I saw. Instead of a simple chain in a straight line, this chain ran around in a square, to fit into the building that houses it. When I first went into the MSH I found the supervisor standing in the middle of the square, arms folded across his chest, staring intently at the people working on the chain. They worked silently, with little contact between them, many of them wearing headphones connected by a long spiral cable to an overhead system. This enabled them to block out the noise and listen to music.

In the middle of the MSH was a small, square control room with windows on three sides which contained desk, chairs and computer terminals showing throughput, stoppages and so on.

I was struck by the absence of joking, banter and singing that I witnessed on the chains, to one degree or another, in all the other plants. A killing chain is not a pleasant place to work but in most plants visited, the people working on the chain were able to transcend the ugly reality of what they were doing through informally relating to one another in groups close to each other. I saw none of this at Plant 2. There was no doubt that the primary concern of this work place was production. The supervisor had an uncompromising view of correct behaviour in the MSH:

> **"I don't stand for any nonsense like playing around - throwing meat, wiping blood on people and so on. They do this sort of thing because it's so boring, but it's not on. They get two warnings then they're out."**

The butchers received very little training in such areas as safety, but they did receive approximately as much training in the new system as butchers at Plant 1. The effectiveness of this was influenced however by the ongoing problems with the negotiations, the lingering bitterness of the long strike and their generally negative attitude brought about mainly by the Supervisor's style of management.

The supervisor was an experienced butcher, with five years on the chain, five as subforeman and five as supervisor. He put any problems with the new technology down to the interference of the union who "stirred the men up". However, the tradition of this MSH being non-militant in prior years and observation of the dictatorial style of supervision and the interviews with butchers and labourers, as well as the MAF inspectors points to the style of supervision of the Supervisor and the lack

of empowerment of the employees in the MSH as a primary cause of the poor response to problems with the new technology and the subsequent long payback time.

7.3.4 *Ownership*

A new General Manager had been installed to implement company wide policy in place of the existing General Manager who was perceived by the workers to have been "his own man" and to have been replaced because of this.

The original small plant, family feeling had been diminished by the series of mergers with larger companies. Under the previous General Manager who left after the last merger this feeling had been fostered again through that person's uncompromising attitude that Plant 2 was his plant and he ran it the way he saw fit. He was a popular person and the feeling that Plant 2 was their own plant began to grow again. After the merger, two years before the new chain system went in, the new owners' corporate policy was to have each plant as a profit centre with a central corporate policy orchestrated from Head Office. The union claimed that the General Manager was pushed out by the new policies and the current General Manager, brought in from another plant, was much more of a company man first, Plant 2 man second. The General Manager was aware of these negative feelings and perceptions about the change and felt they were caused by the company simply imposing the ownership changes without enough warning or consultation with the workers. He felt that the reasons and justifications for bringing in the new technology were not put across to the butchers sufficiently strongly. The implication here is that the butchers were resisting the change. But, in common with butchers at all the plants, they knew

that the advent of new technology was inevitable and that this was necessary for the survival of the industry. There was no attempt to prevent the new technology from being installed. The concerns of the butchers and the union were about what would happen to those people displaced by the new technology, the speed of the chain and how much those remaining would receive in pay. The union was also very well aware that Plant 2 wanted to install the new machinery for nearly a year beforehand through informal contacts between the chief engineer and the delegates. The actual official announcement of the implementation may have been carried out a little hastily, no doubt because of the difficulties in communication caused by the strike, but at no time did the butchers, their delegates or the regional union officials voice any desire to resist the implementation of the new system, either here or at any of the plants. The misapprehension of the GM that the problems with the new system were caused by the resistance of the butchers was a view also voiced by the Supervisor, and indeed this was the source of the GM's view.

The negative perceptions by the butchers about the GM's degree of autonomy were important influences on the employees' attitudes. Plant 2 had been a small plant which was a part of the local town. After several mergers and corporate transactions they found that now they worked for a big company and their plant had become just another company profit centre. The new General Manager attempted to address these perceptions and began to bring about changes in the old, formal way the plant was run by pushing responsibility down onto the supervisors. As he said, under the old structure,

> **"Supervisors at the sharp end simply recorded who was there and arranged the chain manning. Real decisions were made at a**

higher level and handed down. Now the supervisors have much more responsibility, they're not just puppets".

The old structure was more formal. The new General manager hoped that by flattening the structure and making communications less formal he would engender a happier, more efficient work place. He saw this as a much better way of managing.

"You'd be a bloody fool if you thought you could manipulate 500 people all by yourself. People aren't robots, it's different from the 1920s."

However, this hope did not eventuate, at least in the MSH, largely because the delegation stopped with the newly empowered MSH Supervisor. His style of management and negative attitudes about the people he was responsible for combined with his newly enlarged discretionary power, in fact meant that his control tightened over them.

The feelings on the part of the butchers that Head Office simply saw the plant as an investment from which they wanted a certain return and that the GM had little say over plant policy was strengthened by certain events soon after the new company took over. Many of the long serving butchers enjoyed cheap company rental housing. The rents on these were quadrupled by an order of Head Office. Supervisory staff, also were discomfited by the removal of their monthly Friday afternoon "shout", where the plant laid on free drinks and food after work. The feeling that they were working at a homely little plant which looked after them was rudely shattered.

Now the work force at Plant 2 saw that the GM had to carry out policy created at a higher level for the whole group. The plant's interests were seen as being submerged

in the larger group. Employees missed the intimacy of the small plant, personalised, local decision making that had prevailed previously. As we have seen at Plant 1, it is possible for the GM of a small company plant to preserve this feeling of intimacy by fighting for his plant at Head Office level, even where the GM is appointed from outside.

The GM at Plant 2 was appointed from another plant and saw himself as a company GM first, Plant 2 GM second. In addition, the company wide perspective was reinforced through the GMs from each plant sitting together as part of the company management team to formulate company strategy into which each plant fitted. The company strategy was evident in the use of Plant 2, as a small, traditionally harmonious and efficient plant, as a test bed for new technology as well as in the company strategy of promoting people across plants and fast tracking suitable candidates for management through departments and plants. But these strategies, or perhaps the way in which they were implemented, led to feelings of alienation among employees at Plant 2.

There was very little feeling of team spirit discernible anywhere in the MSH. The butchers stuck together to an extent but there was no spirit in this and the orientation was away from management and company aims. The Supervisor felt very much on his own and had no team allegiance with other managers. The MAF inspectors resented the Supervisor's bullying approach and stuck together, but again with little spirit. The fitters worked well together and had a positive relationship with the Chief Engineer and the second engineer but they did not have a very good relationship with the butchers. They also did not like the Supervisor because he would try to bully them when the new system would experience one of its frequent breakdowns.

A potentially powerful energising force, that of all the different people working in the MSH feeling part of one team and that the plant was theirs, was nullified by the policies of the new owners in insisting on control of the plant from head office and the autocratic and alienating approach of the MSH Supervisor.

7.4 *Industrial Relations*

The union delegates in the MSH at Plant 2 were not used to conflict situations, having had a tradition of moderate behaviour. The Supervisor, with his autocratic style, did not tolerate any of the usual kind of behaviour typical in the meat industry from butcher delegates. Even at Plant 1, the delegates were prepared to fight management if the normal working of their unofficial agreements broke down. I never witnessed any such event at Plant 1 but both management and delegates reported that incidents had occurred. They were usually sorted out quickly and were often caused by inexperienced supervisors, especially from other plants, who were not used to the degree of empowerment and latitude enjoyed by the butchers there and did not respond to the "training" from the butchers and other supervisors. The GM at Plant 1 told me that such supervisors who did not change their ways after training were asked to leave.

The delegates at Plant 2, like those at Plant 1, spent around 12 hours per week working on union matters and the rest of the time on the chain working as butchers. They reported that they did not have an easy time because members, too frightened to complain to the supervisor, would complain to them about problems and perceived mistreatment, and blame them when they were unable to bring about any change. The Supervisor simple refused to listen to them and there was little they

could do. Consequently they felt like "the meat in the sandwich", with their members unhappy with their performance and the supervisor treating them with contempt.

The eight week strike that occurred just before the installation of the new system was not instigated by anyone at Plant 2. This was a company-wide strike, orchestrated by the much more militant regional union officials. A similar strike had occurred with the company that Plant 1 was a part of, and over the same issue - redundancy pay. But at Plant 1 the butchers decided to break a long tradition of solidarity with members in other plants and they did not join the strike. This was because they already had a redundancy agreement as part of their plant agreement, something no other plant in New Zealand had at that time.

The delegates at Plant 2 carried out their thankless task as well as they could but they had little enthusiasm for it. Because of the situation they were in they expressed bitterness about the Supervisor but also about their members who they saw as being mostly "gutless" and from whom they felt they received only complaints and criticism. The MSH at Plant 2 was not a happy work site. Most of the people there seemed listless and enervated with none of the spirit and humour seen displayed at other plants.

The difficulties experienced during the negotiations over the new technology were the result of regional union officials, fresh from the long and bitter strike, leading the negotiating team for the butchers and the hard nosed attitudes of the company negotiating team, one of whom was the MSH Supervisor.

7.5 *The Change Process described*

7.5.1 *Negotiations*

At the time of the change the Regional Freezing Workers Union was involved in a conflict with the company over the closure of another plant which had resulted in a subsequent company wide eight week strike over redundancy payments for the laid off workers. The union wanted not only some payment for the displaced workers from the closed plant but also redundancy agreements for all the remaining company plants. The union was informed officially by letter from the Plant Manager on the 12th August that the company intended to install a new dressing system and that they wanted to have this installed by the 17th of October, the start of the new season. The company asked for their agreement to be renegotiated as soon as possible. The company expected negotiations to be substantially resolved by the start of the new season, leaving only small adjustments to manning that could not be resolved until the system was trialed. A trial period of two weeks was suggested and it was stated that finalised, signed agreements would not be possible until then. The letter went on to guarantee full pay at current rates for the trial period except where there were "unauthorised meetings or industrial action.".

Negotiations duly started in August to work out preliminary mannings and new rates. These negotiations were set in the context of the company wide dispute which escalated into the eight week strike and this confrontation appears to have influenced early attitudes by regional union officials. Parties to the negotiation on both sides were locked in a bitter dispute over another matter and the combative stance carried over into negotiations about the new system.

The union official in charge of these negotiations for the freezing workers was seriously concerned about the intentions of the company and warned all delegates and secretaries in the company plants by memo that the proposed new rates and mannings

for the chain could have "serious repercussions for all butchers in the province." He went on to warn them of "The type of industrial manager they were having pushed on them and if they thought past negotiations were tough then they were in for a rude awakening." Because of the strike and the fact that this was the off season when little killing was done, the union had few of the traditional weapons available to influence the course of the negotiations until the system actually started up. Instead Union officials approached the Engineers Union in an attempt to get them to pull out their fitters who were working on the installation. The Engineers Union members and delegates at the plant were unwilling to go along with this. Regional Officials of the union were approached by their counterparts in the freezing workers union and asked to help. These Engineers Union officials then came to the plant and ordered their members off the job. This resulted in work stopping for a few days but some engineers refused to stop and there were ugly scenes where freezing workers attempted to stop fitters from entering the plant. Bitterness about this still lingered two years later and undoubtedly affected problem solving during the early trial period. This lack of solidarity between members of the butchers and engineers union was seen even more strongly at Plant 3 where this topic will be explored further.

The opening of the new chain was delayed by the ongoing strike and did not start up until the beginning of December. The residues of the eight week strike still appeared to influence the tenor of the negotiations with many meetings taking place and little agreement being reached about final mannings and rates, especially for learners. One freezing workers union official in particular was worried about the company's tactics and told members that company negotiators were not to be believed and were only trying to impress their bosses. The negotiations were full of threats and

counterthreats of stoppages, short weeks and so on. At one point the union threatened to bring in the President of the New Zealand Council of Trade Unions to break the deadlock but this was avoided.

The company had hoped for a two week trial period but four weeks after installation the hock cutter and final puller were still giving problems. The speed of the chain, a strong negotiating point for the union, was still not up to the desired 9.8 carcases per minute. The union maintained that the men could not work at that rate and could only handle 9.2 at the most. The final speed settled on was 9.54 carcases per minute.

By mid January, the union said they liked the new system in principle and now felt they were ready to settle an agreement. The final puller was still giving a lot of trouble and pelt damage was higher than was desirable. Negotiations dragged on for another two months with short stoppages and threats of action by both sides being made, but no clear agreements on the substantive issues of rates of pay, speed of the chain and length of the working day.

From this point on the people who had previously led the negotiating teams took a less active role in the negotiations. The chief union negotiator had been heavily involved in the company wide dispute and the chief company negotiator had a very uncompromising attitude. Both sides felt that negotiations would become easier if these people were not involved as leaders any longer. The person leading negotiations for the company was perceived as "playing hardball" and being "impossible to deal with" by the union. The person leading the union team was an old style unionist who was perceived by the company as one who "argued from principle rather than fact". The union decided it was time for a new approach and a younger member of the team

took over as leader. He was equipped with the data on unit costs, relative efficiencies and so on and was prepared to negotiate from the basis of rational argument and knowledge.

However while the old union team leader was perceived by the company as an old style union negotiator - "table thumping and swearing" the new union team leader, while more rational in his style, was seen by the company team as being just as intractable as their own new leader was proving to be. Talks very quickly stalled again. At this point the company brought in yet another negotiator as their team leader who had a lot of experience negotiating with the union as Industrial Officer at another plant. This man was described by one of the company team as having:

> **"a softer approach and believes in compromise. He comes from an industrial relations background and has a negotiator's point of view, while the old team leader thinks like a manager."**

Finally at the end of March, an agreement was reached. But not all the company team were happy. The MSH Supervisor in particular felt that the settlement was too soft and that they should have continued their "hardball" approach. He knew, as did the union, that in the final analysis the union had little option but to work the new chain as it was the only one.

The industrial relations climate at this plant had traditionally been very moderate. The traditional culture of the plant and homogeneity of the relatively small work force meant that industrial harmony was the prevailing norm. It was unfortunate that negotiations for introduction of new technology were held in a context of full scale conflict in the form of the eight week strike. The cause of the

strike, closure and redundancy, contributed to union fears of new technology. The company for their part were determined that they would not be pushed around by the union. Neither side wished to be seen as weak. On the other hand both sides wanted to reach agreement. The men had lost eight weeks pay and the company had lost eight weeks production and wanted to get the new system working quickly so that they could begin to recoup their investment. The factor that enabled final agreement to be reached was the new team leaders' different approach - in particular the company leader's experience and negotiating skills. In the words of one of the union team:

> **"It was lucky he was there or we'd never have reached agreement."**

The trial period was scheduled to last two weeks. It was three months before the chain was running at full speed for the whole day. It is highly likely that, in addition to the problems posed by the autocratic style of the MSH Supervisor, the combative nature of negotiations and the conflictual context in which the introduction began made solution of purely technical problems more difficult.

It took a year to get the final puller to run properly. The hock cutter and wide to narrow spreader continued to give problems until they were both removed. It was said they were too complicated to ever get right. All the plants studied experienced problems with "bedding in" new machinery. But I saw the wide to narrow spreaders and hock cutters working well at other plants running at comparable speeds. The machinery and technical qualifications of engineers was certainly the same. The critical differences appear to lie in the areas of negotiating style, supervisory style and, initially at least, butchers' attitudes to the company. There was little incentive for

the butchers to make any effort to make the new technology work properly. They perceived that they were treated like children so it was tempting for them to take little responsibility for their own work. The General Manager's policy of increasing efficiency by pushing responsibility down appeared to have stopped at the level of the supervisor.

7.5.2 *Preparations for the Change*

The Chief Engineer kept up with new technology developments through MIRINZ publications and conferences. He saw it as part of his job to look for ways of cutting costs and making the operation more efficient from an engineering standpoint. He alerted the Plant Manager to the new system and automated machinery and they made a limited trial with some mechanisation before the inverted dressing system and full range of automatic machinery went in, in 1986.

The Chief Engineer and the Plant Manager then prepared a cost benefit analysis and presented this to the General Manager who presented it to the board. They were turned down at first and so they went to another small plant operating the system successfully and gathered more data and information. The MSH Supervisor was brought in to this process and the plan was updated and presented to the board again. This time the plan was accepted. The company decided that they really needed to look at these new ways of operating more efficiently, especially as they could see that other plants were starting to. The decision was made to use Plant 2 as the test bed for the new system for the whole company. The payback period was expected to be twelve to eighteen months.

The union had been expecting the chain system and automatic machines to be introduced for the last three years before the introduction. They regarded it as an inevitable result of increasing demands for efficiency and the fact that the new technology had now been proved at other plants. The main concern of the freezing workers was people being laid off as a result of expected lower mannings. They did not want anyone to lose their jobs but realised that some would have to go from the chain itself. They were also concerned about how much they would earn under the new system and how much faster the chain would move. The management promised no redundancies and to maintain current rates of pay until the end of the trial at which point they would be paid the difference between the new and old rates as a lump sum covering the trial period.

The first news of the coming changes were fed into the system informally. The Chief Engineer told the fitters eight months before that it was very likely to happen. Freezing worker delegates were likewise told informally to expect changes within the next year. Their reaction was neutral - to wait and see.

Negotiations were to take place during the trial period because both union and management felt they would not know enough about the realities of the system until it was under way. The Chief Engineer is very much a "hands on" engineer. He believes in asking the people who will be affected by the new technology just what they think of it and how they would like it to be set out. A trial "dry" rig was set up so that the butchers could work out comfortable heights and the exact positioning of washers and sharpeners was left until the system started up so that they could be put in place in the optimal place. He experienced little difficulty in communicating and working with butchers or supervisors either during the planning stage or the installation. Joint

planning was carried out with contractors but this tended to be much more informal than at the larger plants studied.

The workforce in the MSH were on average younger than the other plants visited. The MSH supervisor felt this should have been a positive factor contributing to their ability to accept change and make it work, if they would only try harder. This contrasted with Plant 4, where the senior butchers were an average age of fifty and they were having a lot of trouble with the new technology - learning new ways of doing things and coping with the increased speed of the chain. Management there were faced with the problem of the senior butchers wanting to work on the new chains because of the promise of extra money and partly because of pride and not wanting to be sidelined. But these same butchers, because of their age and fitness levels, found it hard to keep up with the increased speed.

The change at Plant 2 was not quite as drastic as at the other plants. They had already partly converted to the system two years before as a trial and this had gone well. The men were not as apprehensive and did not have to learn as much as at the other plants studied. At Plant 2 the normal problems associated with change appeared to be exacerbated by the conflictual context in which the company attempted to make the change. Management and the small workforce, young and with a history of moderation in industrial relations and loyalty to their plant were definitely affected by the bitter, company wide dispute over closure and redundancy.

Both parties to the negotiations over the new system had a wider agenda than just the change at Plant 2. Management were determined not to give in to union pressure and they also wished to trial the new technology at Plant 2 to see if it could be introduced at all their plants. The union wanted to ensure that their members would

benefit from the changes as much as possible and were highly suspicious of the company's intentions. They felt that the company wanted to reduce unit costs and increase profits by increasing productivity with no corresponding increase in pay. They regularly spoke to the members in the MSH while negotiations were going on and successfully communicated these suspicions to the butchers. An atmosphere of suspicion and fear permeated this period of negotiations. One member of the workforce was not allowed into the stop work meetings because the worker was the fiancee of one of the management negotiating team and it was felt she would act as a spy for management.

Management had not expected problems with the negotiations or in implementing the new technology. The workforce in the MSH were seen as moderate. They were young and the supervisor's no nonsense, paternalistic style ensured that there was rarely any trouble in the MSH. Initially they had seemed keen to start on the new system. They had seen videos of the system working and felt it would be easier and they had the motivation of increased pay. As there was only a single chain they had little alternative but to make it work.

The workforce were additionally pleased that the company was investing in the plant. They saw this as a positive sign of faith in them and the plant's ability to survive at a time when restructuring and closures were going on all around.

However, a combination of ripples from the bitterness of the strike and the negative and autocratic style of the Supervisor resulting in a disempowered and alienated work force who had no motivation to assist in making the new system work.

7.5.3 *Training*

Training for the staff using the new systems was similar to that at the other plants. Senior butchers, along with the supervisor, assistant supervisor and fitters went to another plant to see the system working. Videos were shown to the rest of the staff and the staff who had visited the other plant were expected to train their peers. The effectiveness of this training was spoiled by the ill feeling resulting from the legacy of the long strike. The bulk of the training was carried out on the job during the trial period. Plant 2 was already used to the inverted system but it still took some time for the butchers to become familiar with the new system. When asked why this was, butchers responded by intimating that they simply were not interested in cooperating in the new system "just to make [the MSH Supervisor] look good."

Supervisors at Plant 2 received off site training courses but as detailed above, the MSH Supervisor benefited little from this as he considered much of the content of these course to be of no value at all.

The technical staff all received training in the new technology but, as at Plant 4, they complained that they did not have enough resources made available to them, such as diagnostic computers for the electronic components of the new systems. These gave trouble at all the plants and it took some time for the engineering staff at Plant 2 to familiarise themselves with it sufficiently so that they felt confident they understood it.

7.5.4 *Installation*

The Chief Engineer worked with engineers from the company that manufactured the technology and they had a harmonious working relationship. The installation was marred however by the efforts of the butchers' union to make the

fitters and other members of the Engineers' Union boycott the new technology, in support of their strike. The fitters eventually accede to this demand after receiving orders to this effect from their national union officials but the effect of this was just to slow down the installation.

The Chief Engineer and the fitters worked with butchers to handle spacing of work stations and placing of ancillary equipment such as sterilisers. The Chief Engineer had a positive approach to people and generally his relationship with the butchers was quite cordial. It is likely that his style ameliorated some of the negative effects of the strike and also of the resentment for the MSH Supervisor.

The Chief Engineer felt the installation went as well as could be expected but the MSH Supervisor felt it should have been much faster and that consulting with the butchers was a waste of time as they either didn't know or wouldn't cooperate honestly. The Chief Engineer refused to allow the complaints of the MSH Supervisor to influence him and he just carried on with what he saw as the best way to achieve optimal results. The Production Manager largely kept out of both the technical aspects of the installation, having little knowledge or experience to contribute, confining his interest to regular progress reports which he forwarded to Head Office, who were interested in how this new technology would work.

7.6 *Summary*

In summary, Plant 2 displayed relatively low levels of the positive constructs and high levels of negative constructs. The change in ownership had engendered disquiet among the staff and this was strengthened when they saw their customary benefits being removed, a sign of the rule of Head Office. The new GM was rarely

seen and perceived to be a "company man" who was not prepared to fight for their welfare and benefit. Neither the GM nor the Production Manager were familiar with the working of the MSH and the MSH Supervisor was left to run it as he wished. In turn, the MSH Supervisor did not want "interference" in his operation and felt contempt for both his superiors and those for whom he was responsible. His autocratic and bullying style saw highly skilled butchers treated like children. Although delegation granted to him was high, he failed to push this delegation downwards. He had little faith in the competence of his butchers and these factors worked together to bring about a negative cycle of mistrust. The butchers "worked to rule", with little sense of ownership, doing only what they were ordered to and responding only to formal commands. There was none of the informal problem solving and communication observed at Plant 1 which contributed greatly to that plant's success. Plant 2 was a stark reminder of the cost of the negative management cycle. Employees at all levels were unhappy and dissatisfied with none of the spirit and alertness of the staff at Plant 1.

Chapter 8: Case Study of Plant 3

8.1 *Background*

Plant 3 is an old plant, built in 1914. The plant was purchased by a local farmer cooperative in 1922. By the time of the conversion of the MSH chains to new technology, the cooperative had seven plants. In 1914 the total annual kill at Plant 3 was 3200 lambs. At the time of the study Plant 3 was a big plant with four chains, each with a capacity of 3500, giving a total killing capacity of 14,000 lambs per day. Plant 3 was located on the fringe of a small town of 13,000 people, and with 1100 employees, the meat works was the biggest employer in the area. The majority of the staff came from the local area and had lived there most of their life. Labour relations were traditionally relatively good at the plant. Most of the workforce knew each other well, went to school together and so on and this homogeneity contributed to the feelings of loyalty to the plant and each other. But the change process uncovered a great deal of latent negative feelings from the butchers towards management and the company. The reasons for this will be examined later. Plant 3 took the longest of all the plants in the study to pay back the original investment and it is likely that much of the reason for this is the negative relationships among staff, lack of trust and empowerment and feelings of alienation from the company. However a contributing fact may have been that Plant 3 changed all four of its chains simultaneously which was a very big engineering project. Plant 4, with six chains, only converted two chains, intending to convert more if all went well.

It has already been noted that at all plants skin and carcase damage increased during the trial period as butchers familiarised themselves with new configuration and

increased speed. The automatic hide pullers also proved to be difficult to operate at first, even at Plant 1, the most successful plant. This damage added some cost to the new technology but because of the difficulty of obtaining accurate figures from all the plants, I have omitted these figures from payback calculations. Plant 3, however had the highest official figure for carcase damage of all the plants at 9.5% after three months trial compared to 2.5%, 2.9% and 3.7% for plants 1, 2 and 4 respectively. These figures were either better than, or very close to, figures for the old systems. I could obtain no figures from Plant 3 for skin damage but the Supervisor of the fellmongery, which processes the skins, told me that there had been an abnormally high percentage of damage for well over a year and that the plant management covered this up to make their performance look better. He could not put an exact figure on this but knew it was much higher than previously and that increased damage was expected at first but that it had gone on far longer than predicted.

The local loyalties and relatively low levels of industrial conflict have meant that over the years the company had been able to keep the pay rates at Plant 3 lower than at most of the other plants in the company. Another reason for this was that, unlike in the more southern area, where there were a large number of plants competing for itinerant butchers each season, there was no competition for butchers during the killing season. Plant 3 was one of the lowest cost plants in the company, partly because of the lower pay. The butchers knew this and as the new technology change unfolded this was another factor adding to their disillusionment and sense of being betrayed.

The two years previous to the implementation had seen a steady decline in stock levels and increasing competition between the plants to buy stock. Everyone in

the industry could see that closures were imminent and workers at Plant 3 were only too willing to participate in action to save their plant.

The new technology was installed as part of the company's drive to achieve lower processing costs in order to remain competitive. This was seen as essential to survival. Plant 3 was approved for a massive $13 million dollar refit by Head Office to upgrade many of the buildings and machinery, install a new boning facility for added value production, new freezing rooms and to put in new technology in the MSH. The company criteria for plants to qualify for this were that the plant should demonstrate "evidence of constructive, co-operative and willing worker attitude" (Official plant history, p. 72).

The technology chosen here was different in some respects from that in the other three plants in the study. The inverted chain was installed but instead of having a separate shoulder puller and final puller, a machine which did the entire job was installed on each chain. These were known as "carousels" and were large, complex pieces of hardware, dominating the entire chain. The MSH was located in a three story building and this had to be modified to accommodate the new technology.

Plant 3 was a work site characterised by bad feeling, lack of communication and low morale among most of the staff I saw and talked to. The supervisors' smoko room was quiet with little interchange between the people eating and drinking in there. The room itself was dark, dingy and cramped with the noises and smell of the MSH in the background. At most plants, the smoko rooms are alive with chatter and gossip, friendly insults being thrown around and an overall feeling of camaraderie. There was none of that at Plant 3. The staff generally read news papers or just sat and stared into the distance. At the other plants my presence would excite a great deal of

interest and I would become the butt of jokes and friendly banter. There was not much interest in my presence here. The smoko room for the managers and office staff was better. This was brighter and had a pool table and the people there were more animated but again there was a reticence about the people, very few asked who I was and what I was doing there. Senior managers had a very grand room, with wood panelling and carpet where the GM and four to five other senior managers had lunch and took tea breaks in a very constrained manner. It was very noticeable that there were only production staff in here. The senior engineering staff kept to themselves, even though they were officially invited to join the production people and they had their own lunch room only a few metres away. This was a further indication of the estrangement between production and technical staff at all levels.

8.2 *Success Measures*

Plant 3 took six months to reach 91.5% of the potential of 3600 per chain, The investment in the new system on the killing chain process cost $4.8 million for the four chains (Chief Engineer's figures), the cost of the actual machinery and conversion, and the investment took 5.5 years to repay, considerably more than Plant 1's 1.5 years. The total cost is allocated to the four chains separately for the purposes of comparing the plants. There were considerable savings made in labour costs - butchers down from 61 plus 7 spares per chain to 39 plus 3.5 spares per chain and labourers down from 35 to 24. In total the workforce in the slaughter house was down from 250 to 160. Supervisors saw this as making their jobs much easier. But daily throughput even 6 months after the installation was less than the old tally which was 3497 per chain per day. The results in the first year were marred by a bad season for

the farmers supplying the sheep which resulted in a shortage of stock and a short season for the plant.

Technically however, the installation was counted as a great success by the engineers and the chain was running at full speed only a month after installation. But as mentioned above, although the chain was capable of running at full speed, breakdowns and problems of various sorts ensured that up until the end of the study these technical problems continued to dog the system.

8.3 *Construct Factors Contributing To Change Process*

8.3.1 *Trust*

Plant three had a controlling culture with poor communication and negative relationships. This was a result of several factors. Firstly the size of the plant and the hierarchal structure (Fig. 1) meant that informal communication and problem solving were not easy. Secondly, the autocratic style of the Asst Manager ensured that any attempts to break through the formal frameworks were rebuffed and even punished (see below). This kind of culture of separation fostered suspicion and bad feeling but at the time of the implementation of the new system, the company made a concerted effort to form a new culture based on team work, consultation and informal networks. The GM addressed the butchers to announce the incoming new system and he told them that this was the start of a whole new era of cooperation. The emphasis would be on quality production and the work would now be much easier with the new machinery. A human resource specialist came in from head office to train all the staff in the new ways of team work, consultation etc. All the staff in the MSH went through two days of training and although many people were suspicious of this at first,

most of the butchers decided to give the company the benefit of the doubt and go with this new way. They could see that this could benefit them a lot. They felt that finally they might be able to really make use of their skill and experience and be able to contribute more than "just their arms and legs".

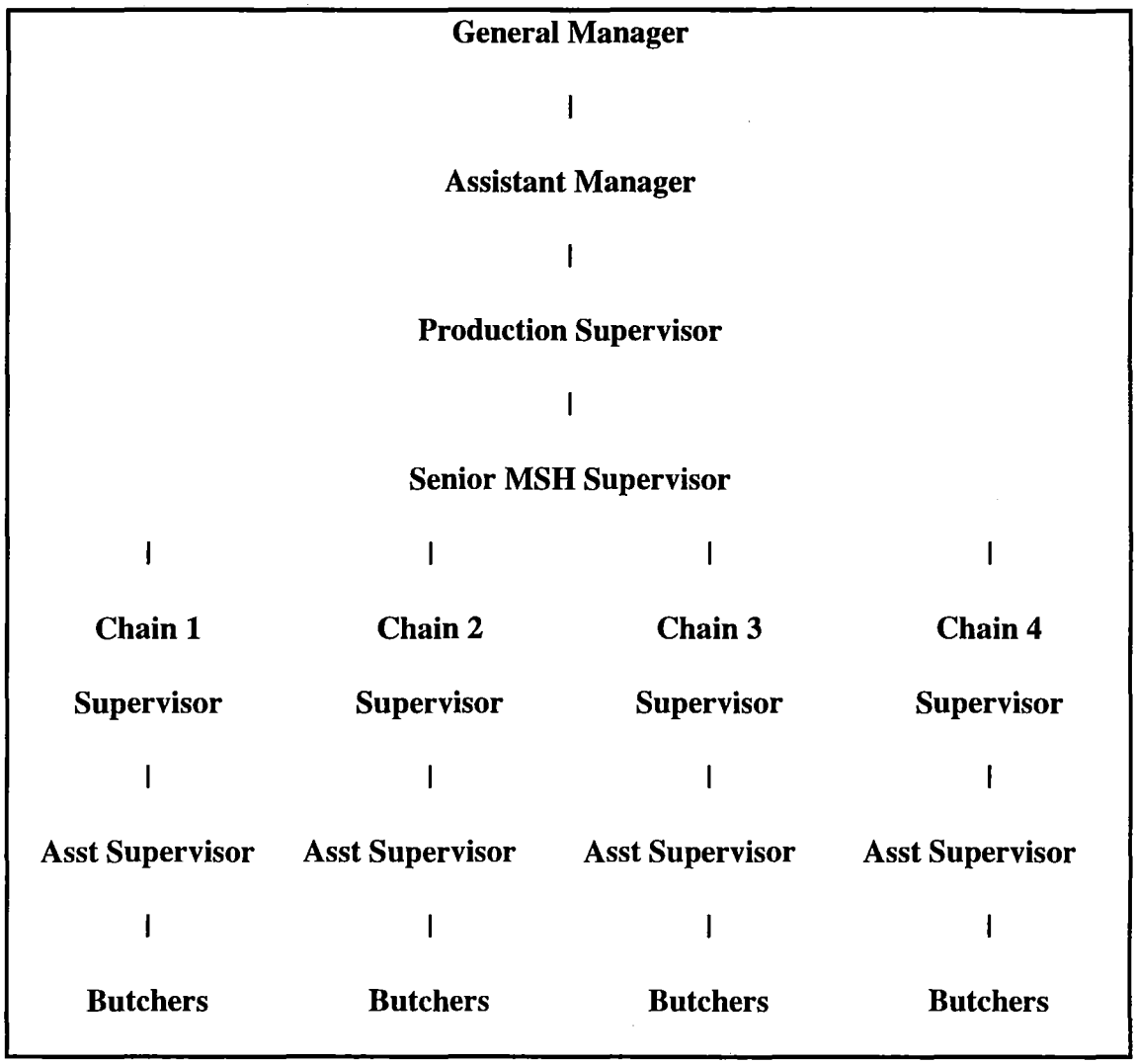


Figure 1. Chain of Command at Plant 3 MSH

Their expectations were raised to high levels and they were looking forward to helping to implement the new system. Unfortunately, their high expectations were not met. They found that the same old culture prevailed when they came to start working on the chains. They were not consulted about positioning of machinery and

ancillary equipment. Most of it was already installed when they first took over. Suggestions from them were ignored or treated with contempt as they always had been before.

The men felt let down and betrayed. Morale, raised higher than it had been for years, now plunged to new lows. They felt their trust had been violated. They felt like fools for swallowing what they now saw as a simple confidence trick, designed to ease them into the new technology without any trouble from them.

In fact, the GM had a sincere desire to change what he saw as a negative culture by bringing in the human resource specialist from head office to train them all in a different way of working together. The butchers were more than willing to go along with this but the supervisors, led by the Asst Manager, although they were required to go to the training sessions, had no intention of implementing the new consultative, team work in the MSH.

The people manning the chains now had no trust at all in management, the supervisors or the company. It was in this atmosphere that the trial period proceeded at Plant 3.

The butchers felt that they had been lied to. Here are some views from butchers:

> **"We were told a lot about how we would work together as a team with management to sort out problems and come up with ideas....but this is not the case. They don't take any notice of what we say at all."**

> **"The new teamwork scheme was just propaganda to lead us on. They promised team work and one big happy family but this wasn't what happened. Now I couldn't give a stuff about the place."**

> **"We were apprehensive about the new technology - we'd had the old system more or less unchanged for thirty years. But the company sold us on this team work thing and we thought the new systems would bring benefits for us all. Butchers, the company, farmers and customers. In the end only the company benefited."**

The personnel manager had helped organise the teamwork induction courses and he expressed embarrassment about the way it had turned out. He had encouraged people to do this course and he felt let down himself by what happened. He felt that the reason that teamwork and consultation was never implemented in the MSH was that in the end

> **"The old numbers game took over. Management didn't have time for anything but punching the sheep through. That's what they know how to do. This is how it is with everything here."**

There were mixed views about the cooperative scheme from the supervisory staff in the MSH. A few felt as positive as the butchers had about it. They put the failure to follow through with the promises down to the pressure coming on them from "the hierarchy" to get the chain working at full speed.

> **"A lot of the stuff that was preached to us at the induction course about consultation and team work just got left behind when the boss started putting the pressure on to get results."**

These supervisors felt let down and that this had made their relationships with the men and hence their jobs, more difficult:

> **"The company conned us - let us down - we won't forget this. I still get it thrown back in my face when I'm talking to the men about something new with the company. It will make it difficult for anything new in the future."**

Other supervisory staff, including the Asst Manager, felt right from the start that "it was all a lot of nonsense" and never had any intention of applying these new approaches to the way work was carried out. The Asst Manager commented:

> **"These people don't want to make decisions - they just want to be told what to do. I'm the boss, I'm here to tell them what to do. They're here to do it."**

Another supervisor felt that he was out of his depth with the ideas about team work. He was not happy with the fact that the company had promised the men that their would be team work and consultation but:

> **"All the talk about team work and so on - I was a bit worried about it. I don't know about all that stuff. The training we had was not very good - most of us thought it was pretty weird stuff - not our style at all and we didn't feel comfortable with it. And in the end it was all the same old thing anyway. We just got told what to do and had to tell everyone else what to do."**

Their was little trust or respect between the Asst Manager and the union delegates. They felt that every time they tried to be accommodating with management it cost them - they were always the ones who lost out and had to pay. They felt that management tended to look on attempts at accommodation as weakness and would simply use this to exploit them. This was somewhat confirmed after a wage negotiation when the Asst Manager remarked to me that he was amazed at how low the union had settled. "They could have got much more the company was vulnerable, we had spent all this money on the new technology and we had to get it running - they're a useless lot - no balls.". He also accused the union officials of being liars and of having no real power. He maintained that at negotiations they had to keep going and consulting with their members, that they were too scared to make the "hard decisions" themselves.

For their part, the union officials accused the Asst Manager of exactly the same things except that in his case he used the ploy of having to consult head office as a delaying tactic, not out of weakness.

Perhaps the ultimate display of mutual trust at Plant 1 was the "makeup agreement", where the butchers came up with a scheme where they could go home as soon as they'd finished their daily kill tally. This agreement, entirely informal, contributed a great deal to the excellent performance at Plant 1 and did much to further build and foster mutual trust there.

A similar scheme had been tried at Plant 3, not in the MSH but in the beef killing shed. The butchers there had put the idea up to the company, it was accepted and implemented and the men regularly worked at speeds far above standard times so that they could finish and go home up to two hours early. However, at the next annual wage negotiation, the company used their ability to sustain high speeds to push the standard speed up. This meant that they men lost money but the biggest damage was to their trust in management. Again they felt betrayed and let down.

This never happened at Plant 1. And it is worth noting that Plant 1 carried out their scheme after their counterparts at Plant 3 had experienced the negative outcome. They knew all about it, as did the regional union officials who were so against their implementing the scheme, but they felt sure that their GM would not betray their trust - and as it turned out they were right.

8.3.2 *Integration*

A new General Manager was brought in to see the plant through the trial period. He had had experience of installing this same technology in another company plant. He was a skilled administrator and his prior experience undoubtedly helped the initial technical success of the new technology installation. However he did not have a good facility with informal communications.

Feelings about him were mixed among the work force. He had not come up through the hard school of the production chain - he had a background in food technology and was happier keeping in the background, leaving the day to day production problems to the Assistant Manager. He was perceived as "remote but fair" and "okay but a bit strange and hard to talk to" by most of the workers and had a reputation as being very clever but not very comfortable with freezing workers. For example the story was related about Christmas drinks put on by the plant for all the workers and their spouses. The General Manager stayed very quiet, not drinking and only speaking to other managers. On the other hand he was perceived to be humanitarian and a story was told about how he'd helped to pay a worker's fine to get him out of jail after a petty offence.

He was reported to be seen in the slaughter house only rarely and I never saw him there on my three visits. However the perception I had was that people were glad to have him there as he had the reputation of being very clever and the employees felt he could help keep the plant open. The GM appeared to be a very methodical person who believed in orderly control through efficient information systems.

Plant 3 suffered from the problems arising from a traditional large worksite - long lines of communication and many layers of management. There was a culture built up over many years and passed on through successive employees, of tough but fair senior management which makes the hard decisions. This went back to when Plant 3 was a stand alone plant when one of the old General Managers who was known as "The Wee Man" had the reputation of being very tough but straight. Butchers are simply expected to do as they're told, consultation was not seen as being possible. As a senior manager stated when talking about the experiential courses run

by Head Office for freezing workers when the introduction of new technology was going on:

> **"It might have been the wrong thing [experiential exercises]. All this stuff about team work and consultation - it'll never work."**

Plant 3 was a large plant with 4 chains. In the MSH there were 4 supervisors and four assistants, one for each chain and a Senior Supervisor over them. The Senior Supervisor reported to the Asst Manager. Plant 3 had the highest frequency of negative factors in this category, at 26 for formal communications and 24 for formal problem solving (compared to 8 and 9 respectively for Plant 1). Although this was partly the result of the sheer size of the operation, the influence of the Assistant Manager and his autocratic style cannot be ignored. His presence was pervasive and no-one was willing to take a decision without his agreement to it. He was also regarded as a hard man to deal with by the union in the plant. The union butchers' delegate told me that the Asst Manager used "the Soviet style negotiation technique - "NO!"

Most of the employee and labour relations matters, as well as the actual control of the processing, were left to the Assistant Manager- an old style freezing works manager - who had come up through the ranks of butcher - supervisor and was perceived to be "a hard man but he means what he says". He had been in this position for 10 years and at the plant for 37 years in total and regarded the plant as his life's work. He was not a practitioner of open management and his style was very much top down, directive command and control of the old school. There were many comments about centralisation of authority and supervisors complained that they had little to do

other than keep the chains manned, keep track of who was there and make sure that throughput was maintained. They were allowed very little discretionary power. This extended to the Senior Supervisor so that it was very difficult for front line supervisors to arrive at innovative solutions to ongoing problems. Unlike Plant 2, where the MSH Supervisor had a great deal of autonomy, the Senior Supervisor at Plant 3 had almost no autonomy. The Asst Manager maintained a firm grip on daily processes on the chain and was often to be seen around in the MSH. He felt the new technology made it easier to control the butchers as there were less of them and the faster pace of the chain meant they had less time to "mess around". He commented:

> **"The new technology allows closer control and supervision. Quality was better under the old system but the costs are much lower now."**

Supervisors reported that at "control" meetings, called weekly to discuss ongoing issues between the supervisors and the Asst Manager, the supervisors would be "browbeaten" into agreement by the Asst Manager through the use of phrases such as "We agree with don't we?" when he put forward his solution to whatever problem they were discussing. I witnessed a butcher complaining to a supervisor about a badly sharpened machine cutter which was causing carcase damage. This had been an ongoing problem for some time and the butchers and supervisors had a very good idea of how to fix the situation through resetting the blades in the workshop. However the Asst Manager did not like this solution as he felt the problem really lay with the butchers' deliberately misusing the tools and forbade the employment of any solution other than his own, which was to watch the butchers more closely and warn them of any misbehaviour. All the supervisor could do was to shake his head, shrug his shoulders and say "my hands are tied - I can't do anything."

Supervisors reported that"

"We are told very little about what's going on. We're just expected to make sure the chains are manned properly and keep them going."

The first example I saw of this kind of phenomenon, where people were simply expected to follow orders and not think, was when I interviewed an Asst Supervisor on my first visit. When he arrived he was surprised to find that he was going to be interviewed. He said that he'd just been told he was to report to the office. He had no idea why, his supervisor did not know either.

Unlike at Plant 1, and to a lesser extent, Plant 2, there was very little use of informal approaches to solving the problems of installing all the ancillary machinery with the new systems and with aspects such as height and spacing. The engineers worked only with the supervisors on the installation. There were numerous examples of workers attempting to help and being ignored. As one butcher put it:

"They don't take any notice of what we say at all. The other day when they were installing part of the new system, the stairs on the carousel were put in the wrong place - we told the engineers this and advised them where to put them. They wouldn't listen to us and it took them four goes to get it right. It must have cost a hell of a lot."

Another incident reported was where a butcher had a novel solution to a persistent technical problem with shackles on the chain. "It was a good, practical idea but it took seven months to get it implemented." When I asked the fitters about this they dismissed the claim saying that the butchers didn't know what they were talking about and were always trying to make trouble by making spurious suggestions. The Second Engineer commented on the problems they had experienced with trying to listen to the suggestions of the butchers:

"The butchers tell us something needs changing and we go along with it - which costs a lot of money and time - but we finally said "what are we

> **doing? This is never going to end." We'd ask them - "Where do you want this steriliser put?" We would never get a definite answer and whatever we did was always wrong. When we ask for input we don't expect them to redesign the wheel, we want them to help us make the wheel go round. Some genuine ideas come through, but we are being taken for a ride."**

The butchers maintained that the fitters and engineers would not listen to them and only looked at things from the point of view of an engineer, not someone who has to use the equipment and who knows more about that aspect than anyone.

I saw and heard much evidence of the negative relationship between technical engineering staff and production staff. This existed at all levels, from the fitters who serviced the chains and the butchers right up to the Chief Engineer and the senior management of the plant. The second engineer commented:

> **"There are some problems of communication between us and the production people. The Chief Engineer is a bit of an old fashioned type who finds informal communication hard. He also expects to be treated with the kind of respect a naval officer would receive on a ship. He likes to be in charge. But we all feel we are under attack because of all the problems we are having with the new system. We feel it's the production peoples' fault - they're just not doing the work properly. So now we're in the situation where we just do everything by the book, that makes it harder for us to be attacked."**

This view of the Chief Engineer was echoed by the Asst Production Manager

> **"He [the C.E.] is an ex ships officer and if you want to talk to him you almost have to salute and call him sir."**

Because the Asst Manager held power closely to himself, supervisors and asst supervisors in the MSH were unwilling to make decisions and would simply pass the problem up the line for someone else to decide. There was very little scope for informal problem solving. More often problems would simply be left until they became so serious a major breakdown would occur.

The dysfunctional relationship between technical and production staff and the pervasive hierarchal culture meant that the collaborative relationships vital during the implementation phase were severely hampered. There was resentment and bad feeling between people at all levels and it is not surprising that Plant 3 took so long to make the new systems work efficiently.

8.3.3 *Empowerment*

We have already established the autocratic style of the Asst Manager and his influence over the running of the MSH. Discretionary power was very limited, even to the Senior Supervisor. He was an old style supervisor who had come up through the ranks, but like many of the supervisory staff, he was nearing the end of his working life and appeared to just want to get through each day with a minimum of fuss. This meant he would usually take the easiest path which meant in practice not making any decision that was different to what the Asst Manager would want. He described his position:

> **"I'm responsible for day to day running of the MSH. I have guidelines to work within and keep strictly within these. The Asst Manager keeps a pretty close eye on things here so I leave it to him. It doesn't pay to rock the boat too much."**

This attitude affected most of his chain supervisors who also seemed to want "a quiet life". The Senior Supervisor did not have a high opinion of most of them and was critical in his attitude towards them. He felt that one of the causes of the problems with a lack of consultation was not really to do with consultation at all. He felt that the chain supervisors were not passing on information well enough to the people manning their chains. If they could do this better then the butchers would not

keep trying to put forward their own ideas. However the supervisors told me that they were never kept informed themselves about what was going on. They felt highly embarrassed when their people asked them even something simple such as how many sheep were to be killed that day and they would not know. The butchers themselves saw this as just another example of how useless their supervisors were. The Senior Supervisor said that the reason he didn't inform his people often was because the Asst Manager hadn't told him.

Directives came down from a higher level and they were expected to be obeyed. When a group of butchers on one of the tasks - gutting - devised a system of rotating their work so that the load was spread more evenly between them, the initiative was met with blank resistance from the supervisors. The leggers had been doing this for several days before their supervisor noticed and they had experimented on their own so that no production efficiency was lost. I could find no explanation of why there was such resistance to this initiative other than the implication that the butchers "must have been pulling a fast one" and "we do the managing here, they carry out the orders." The group of butchers was incensed by the injustice and senselessness of this and continued to work under their own arrangement. They were all promptly issued final warnings at the direction of the Asst Manager and then some were sacked. The union took the case to the Employment Tribunal. The mediator ruled that the butchers were wrong to disobey orders but that the management were wrong for not listening to the butchers. The men were reinstated but the new system worked out by the men was not.

This incident caused a huge amount of resentment and bitterness. The job that the men had rearranged was a particularly arduous one and the butchers doing this

were prone to suffer from OOS (occupational overuse syndrome). They also had to be highly skilled and experienced and these particular butchers were acknowledged to be the best ones on the chain. They were proud of this but felt that they should get more pay for doing such a hard, skilled job. Many of the jobs on the chain required very little skill and a few months before the butchers had put forward a suggestion to management that there be grade A and grade B butchers with differential pay rates. Management rejected this, refusing to discuss it. It seemed to the butchers that whatever they tried was simply opposed and rejected and that management simply wanted to keep things they way they were. The Asst Manager said that this was another example of the butchers trying to manage the plant when that was his job. The reason they resisted the job rotation initiative by the butchers, designed to relieve a very hard job, was because it was so difficult they needed to keep the best people on the most difficult parts. Rotation around the jobs meant that less skilled people would cause a drop in quality.

The butchers had many examples of this kind of thing happening to them which they saw as being punished for being good at your job. It was also the most prominent example of attempts by the butchers to contribute their knowledge and experience to the implementation of the new system only to be treated with contempt and rebuff. "This kind of incident sent a clear message to everyone - do not display initiative - keep your head down and do as you're told."

The supervisor on this chain was criticised by some of his fellow supervisors who felt he should have let the butchers do it their way and to argue for the new arrangement with the Asst Manager. But the supervisor concerned said he would not be prepared do this as his own job might be jeopardised.

However some of the butchers at the plant still tried to implement ideas of their own both to improve their lot and to make the new system work better. As the supervisors were often too intimidated to speak to the Asst Manager themselves, they would go directly to him themselves. But with little success. One of them commented:

> **"[The Asst Manager] is tough - very hard to deal with - he plays the rules to suit himself. Sometimes we approach him with an idea which has the blessing of the supervisors but he still won't listen. He's a hard man to move."**

Before the installation of the new system, supervisors were sent away to other company plants to see the new systems working and were involved in discussions with plant management and people from head office about the new system but again a potentially positive process was soured. In the words of one of the supervisors:

> **"We were asked for our contribution but we knew that the decisions were already made and they were just going through the pretence of consultation."**

In general, the plant was run from the top down and no input was expected or welcomed from lower down the chain of command. Supervisory staff were, in general, demoralised and reduced to "getting through the day with the least amount of aggravation as possible". There was little discretionary power handed down.

Training was criticised by the butchers. One butcher who had joined since the new system was put in told me that he was just put on the chain with no training at all. He just had to pick it up as he went. The other butchers complained about this on two counts. Firstly, they felt it was dangerous to put green recruits on a fast moving chain with extremely sharp knives. Secondly, they complained that their bonuses were worked out on output and quality, both of which were affected if there was a new

person on the chain who had to be carried for weeks until he either dropped out or got up to speed. In effect, they alleged, they were paying for the training which should be a cost to the company, not them.

8.3.4 *Ownership*

Plant 3 was a local plant and the biggest employer in the area. Most of the staff came from the nearby small town and knew each other from school, sports clubs and so on. The company had been worried about the interference of the regional union in the change to the new system but in the event the local plant union officials ran the negotiations and prior talks about the new technology. The local officials wanted to keep the matter "in house" as they felt they didn't want the regional officials "crashing around" in their own territory. The staff were worried about the prospect of closure and were anxious to co-operate with the company to get the new technology installed as well as to get the best deal they could for their members.

Plant 3 had a better labour relations record than many other sheds in the area and this was largely due to the staff being relatively homogenous and their close affinity with the local farming culture which suffered if there was industrial strife. However, while overt conflict in the form of strikes was infrequent, there was a great deal of hostility and negative feeling at the plant, as described above.

The staff had some feeling of ownership, but more in the nature of the plant being a local fixture and belonging to the town, rather than the feeling at Plant 1 where the staff had a real feeling that as well as belonging to the local community, this was their plant.

The events preceding the implementation of the new technology and the subsequent feelings of being betrayed deepened the existing negative feelings. The most extreme expression of this I heard was from one senior butcher who said:

> **"Yes, we all know each other outside, we've been to the same schools and many of us drink together. But underneath the hate is there - we're really pissed off at the way the company has taken advantage of us. We keep the place going because there are no other jobs and for the sake of the town but we only do what we have to and that's it."**

Some of the older butchers had nostalgic memories of the "old days". This man had carried out the hardest job on the chain - pelting.

> **"My twelve years on the chain as a pelter were the best job of my life. We had real comradeship because we worked in a group and had a good time. There was a hard core of older guys and we'd sing all day - great atmosphere."**

Although the chains were not as quiet and cowed as the one at Plant 2, I saw little evidence of the kind of experience described above under the new system. There was a perception among the butchers that the company no longer cares about them. One butcher alleged that he was told by the Assistant Manager that the company owes no allegiance to them. The only responsibility it has is to pay them. I was unable to confirm this but this kind of perception pervaded the whole MSH and all the staff, including the supervisors. Another butcher expressed it thus:

> **"Now we are just numbers as far as the company is concerned and I think a lot of it is to with the new technology. The attitudes here now are the worst I've ever known them."**

The fitters who were responsible for ongoing trouble shooting on the new system and for maintenance also suffered from low morale as well as poor relations with the butchers.

They resented the fact that they were more qualified than he butchers in that they had gone through four years apprenticeship but the butchers received more pay than them. They also felt that the butchers were 'Prima donnas" who were forever jumping up and down and screaming about nothing. The fitters blamed the butchers when the new technology gave problems that were hard to resolve. The butchers blamed the fitters and engineers. There was a great deal of friction between the fitters and the butchers on the chains. Butchers were alleged to steal tools and make machinery break down and the butchers did not deny this when asked but added that they didn't make the machinery break down, simply didn't do anything when it appeared to be going wrong. They were tired of having their suggestions ignored or ridiculed and so just did their job, taking the stance that "If this is what the company wants - that's what they'll get".

The GM himself saw himself basically as an administrator who carries out the orders of head office. He did not see that he had much discretion in the way he ran the plant. With the GM having no experience on the chain, the Asst Manager made sure *he* kept a firm grip on the production process and the GM was quite willing to allow him to do this.

Everyone at the plant seemed to be watching out for inequities and making negative comparisons. The Meat Workers Union members didn't like the fact that the company put on a Christmas "shout" for salaried staff only. This negative feeling was shared by the fitters and they complained that the MAF senior inspectors were invited to the Christmas shout but they were not. They felt resentful because MAF staff were regarded as "aliens", people who were not employed by the company at all, yet they were invited.

There was some indication of team feeling inside the different groups of people, such as the butchers and the managers but there was almost no sign of any feeling that they were all one team and working together for a common purpose. Each group moved inside their own world and were full of suspicion and resentment for the others. But even among the butchers, there was no common feeling of camaraderie. For example, The Asst Manager told the butchers delegates, who are all senior butchers from chains one and two, that there would be a short week coming up. He asked them if they wanted to put all four chains on half days or keep chains one and two open and close three and four for a week. The butchers chose the second option, feeling no sense of inequity in this. They felt that this move was justified because they had been there so long and the people on chains three and four were relative newcomers.

This was not a happy plant, with deep divisions and suspicion between the different groups. It is likely that this was a major contributing factor to the length of time it took to work through the problems attendant on the new technology and to pay back the original investment.

8.4 *Industrial Relations*

There were three elected union officials working at the plant who were allowed to spend 10 hours per week devoting themselves to union business. There were also four delegates from the chains to represent the butchers and it was the butchers who dominated the union and its actions concerning the whole plant. In this they demonstrated their cohesion and solidarity but this was mainly to ensure that the union would deal with their problems first. Union members in other parts of the plant,

such as the fell mongery, did not receive as much pay as the butchers and some of them complained that the butchers were only concerned about themselves and didn't care about anyone else.

As mentioned above, there were very few overt industrial relations problems because it was a small town and the workforce was loyal to their biggest industry. At the outset of this new technology introduction, the company successfully fostered a very positive feeling in the work force about the changes. The company had been very worried about an "industrial relations explosion" and so were anxious to sell the idea to their workers. They also wanted to keep out the regional union officials as much as possible because they knew that this could engender a lot of resistance. The company capitalised on the local loyalties of the work force to the company and made a very good job of emphasising the positive aspects of the change. The fears of closure and restructuring also helped to foster a spirit of co-operation in the workforce who traditionally had seen themselves as plant people rather than union people.

The butchers went into the change charged up with relief that there were to be few redundancies, that pay would be maintained, the plant would not close and there was to be a new era of co-operation. The first season with the new technology was a bad one and this certainly affected the butchers' initial reactions to the changes. This was largely beyond anyone's control but many other factors combined to negatively influence the butchers' experience of and reactions to the new technology. But the factor which appeared to have the greatest negative effect was the feeling of having been betrayed by the company over the promised new era of consultation and team work.

Although it was promised that the work with the new system would now be easier, the butchers reported that the work was now harder because of the increased speed and no longer being allowed to rotate the heavier jobs so that they could get relief. This new policy of one man for one job meant that the tasks were very unbalanced. One butcher could have a relatively light job while another had a heavy, fast or technically exacting job. This is why the butchers attempted to get recompensed for this by proposing A and B class butchers who were paid differentially depending on what job they were doing but were unable to reach any agreement about this with management.

The general level of noise was now perceived to be higher. This was particularly irksome as this was experienced as yet another broken promise - the men had been told it would be quieter. Butchers' attempts to assist in the trial period were met with little response or recognition. For example, the stairs on the carousels were in the wrong place. The butchers told them this and also where they should be put. This advice was ignored and it took four attempts on the part of the qualified engineering staff to finally arrive at the position the butchers had first suggested. As they said, "this must have cost the company a hell of a lot." They see the engineers generally as very arrogant while the engineers view the butchers with suspicion, seeing their "advice" as mischief making. Attempts by the union officials to bring these matters up with management were met with a wall of indifference.

The butchers complained about lack of space compared to the old system and felt this was because the carousels were so big and had to be squeezed into the old building's dimensions.

Because of the imbalance in the jobs and the inability to rotate, the union cited instances of men "breaking down" under the strain and OOS problems which all went untended and ignored by the company.

In general the reactions were negative. Some jobs such as legging and pelting were seen to be easier but the downside of this was that the old pride and prestige of doing these jobs was gone. You had to be tough, strong and skilled to do this work and the people who did it were the "elite force". Now the machines do much of it and some of the butchers see themselves as little more than robots. They feel that all the benefits of the new technology have gone to the company and they have borne all the costs. Their perception is that it is now all a numbers game. In the words of a butcher,

> **"It used to be more human - more fun - we were more able to relate to each other. Now it's all throughput. The old system meant that men could work in groups of five or six rotating jobs between themselves. Now the groups are smaller or have disappeared with more solitary work, less rotation, ear muffs and walkmen. The hardest jobs used to have some prestige and pride attached to them. Now they are easier and some of them anyone can do. So the pride has gone with a loss of prestige."**

The union saw itself as being largely powerless and their only resort was to strike. They did not want to do this as they knew it could mean the closure of the plant. The only outlet they had was to resort to working to rule and not cooperating in any kind of proactive way. There is little doubt that if they could have operated in the way that their counterparts did at Plant 1, the implementation of the new system would have gone much better.

There was a complete lack of trust between the union and management and the officials and members experienced great frustration first at not being able to

contribute and second because they had little other options except to descend into a surly and resentful non-cooperation.

8.5 *The Change Process*

8.5.1 *Preparations For The Change*

In common with all the plants studied the union received notification of the impending change some time before it was due to happen - nine months in this case. Negotiations began almost immediately and the most pressing fears of the union were quickly dispelled. Over a hundred workers were to be displaced by the new technology but most of these would be retrained and moved to the new boning rooms that were to be set up. Current wage levels were to be maintained at current levels at least.

Five months before installation the supervisors were included in discussions with management from the plant and Head Office about the changes. They were then sent to other plants where the carousels were installed to see at first hand what they were like in operation. But again the top down attitude soured a potentially powerfully motivating process.

Six weeks before the start, small groups of butchers were sent to Nelson to see the carousels and the inverted chain working and to try them out. These people acted as trainers when they came back. This was seen by the supervisors as being particularly useful in helping to overcome initial teething problems.

The company expected a negative reaction to the new technology from the union and devised a strategy to preempt this by emphasising the positive aspects. A team of human resource specialists came from Head Office to talk to the affected

workers. They put all the butchers and labourers through a team building programme involving role play and experiential exercises which was quite an ordeal for some of them. As one butcher put it:

> **"Many of the guys were not keen about it [the experiential training] - it's not the sort of thing we usually do. But people eventually relaxed a bit and got into it."**

They joined in good faith, getting into the spirit of the event as best as they could. The Head Office team put over a strong message of a new culture of team working, consultation and one big happy family. The men bought this and believed a bright new future was ahead where their jobs were assured and a new happy atmosphere of togetherness would prevail. The message was reinforced by the Chief Executive Officer of the company and the Plant General Manager addressing all the staff in the local Opera House assuring them of minimal job losses, guaranteed pay and a bright future for their plant. Expectations were raised to a new high.

Unfortunately the reality was perceived to fall far short of this promise. I heard this commented upon more than anything else by the butchers.

They felt a strong sense of betrayal, of having been cheated and swindled. A butchers' delegate commented on this in strong terms:

> **"Seventy five percent of the men here would say they had been lied to by management about the new technology."**

Staff in other parts of the plant also felt that the union had been duped by management during the negotiations but felt that the union negotiators were partly to blame because they accepted what management told them about manning levels with little argument when the union was in a strong position to bargain. One delegate from the fell-mongery (not involved in the negotiations or changes) put it like this:

"I was amazed that they settled on what they did and how little resistance they showed. The company did a good con-job on them - convinced them there was no alternative to the proposed mannings and so on.....Management had the upper hand - they worked out all the answers beforehand.....Our union was very slow to react to all this and we had no corresponding strategy."

The unmet expectations caused the initial positive feeling to fall to new lows of negativity. This feeling was exacerbated by the abnormally low kills and hence short weeks and season for all the men in the year that the new technology went in. They had been promised a much better world and they did not get it.
This negative feeling coloured subsequent problems and four years after the change the "carousels" have failed to achieve the promised output and they continue to experience many technical problems.

8.5.2 *Installation*

This installation was a massive project - the largest and most complex of all the plants looked at - and took five months to complete. The actual installation went very well at Plant 3. Some of the senior engineering staff were enthusiastic in their descriptions of the installation process -

"This project was the best six months of my working life." (Chief Electrician)

The work was very well co-ordinated and planning began two and a half years before installation work started. The General Manager was brought in from another plant where he had experience of installing the carousels and the Head Office Chief Engineer took charge of the project. A project team was set up which included all the supervisors from the different technical areas, the Chief Engineer, the Chief Engineer from Head Office and representatives from the various contractors and installation

engineers. Previous experience had taught the Head Office engineers that problems in communication could arise between production staff and engineering staff and that it was important to foster relations between these two groups, especially during the installation process. Supervisors from production and technical areas were sent on courses which emphasised team building, communications and so on in an effort to prevent this.

A critical path analysis was used to control the work and set schedules which were rigorously adhered to. Supervisors were set to work with contractors to ensure that everything went according to the plan. The installation was carried out much faster than anywhere else and was a great success.

However communications between the production and technical staff do not appear to have been as successful as planned. Many butchers complained that the new chain positions were much smaller than before and they did not have enough room, especially now that the chain was moving faster. This was thought to be because the carousels took up so much space that each individual position had to be squeezed a little. The engineers maintained that in fact the positions were either slightly bigger or the same size as the old system. The resolution of this apparent contradiction may lie in consideration of the non engineering aspects of the work stations. For example, if butchers are not now allowed to rotate through the different tasks at a work station employing four people then the sense of space is going to be affected.

It is certainly true that no butchers were consulted about positions, spacing or manning. However from an engineer's perspective, these factors were seen as being transferable from successfully working situations in other plants and therefore not

something that needed consultation. Instead it was seen as just a practical engineering problem to which the answer was already known.

8.5.3 *Training*

The chains were brought in one at a time. The men on each chain had one week's induction training. This included the team building programme, consisting of some practice on the chain, back to the classroom, then back to the chain again. The intention was to have the trial period last for three weeks.

Key people - experienced butchers, supervisors, fitters - were sent to Nelson to see and feel at first hand how the new system worked. These people acted as trainers when they returned. But at least one supervisor felt that this experience was too short and that it was curtailed because of costs and the need to meet budgets. Supervisory staff from other plants with the new technology were also brought in to assist with the killing and the engineering.

It was commonly felt by the butchers that training could have been improved by allowing men to rotate through different jobs and tasks. Under the old system, job rotation was commonly practised on many of the tasks, especially the heavier ones, but management now decided they needed to know where the problem people were and who could do the best jobs on the more difficult parts of the process. The management need to control the process overrode the butchers' need to be able to gain relief from arduous or boring tasks. This explanation was not communicated to the butchers - they were told simply to do as management said.

For many of the butchers starting later on number three and four chains, training was virtually non-existent. A butcher on number 4 chain said:

> **"I had no training at all. I just turned up and was expected to do it. I figured out how to do it by watching the others."**

There was a general perception among the work force that management did not like to spend money on training. This was one of the reasons why it was felt that management resisted job rotation. To adopt this as official policy would have meant retraining for the multiskilling involved. The company also considered that too much money spent on this kind of training was a waste because many of the men just left anyway. This lack of willingness to invest in training was also seen in the new boning operation. As a boning foreman explained:

> **"I couldn't believe it when I found out how we were to be trained. We were just thrown in with no written guidelines at all. No-one knew how to do it.**

When the boning operation was started, an expert boner was brought in from another plant to show the new people how to do it. Being ex butchers they were already familiar with knives, sharpening and so on but the tasks of a boner are very different to those of a butcher on the chain and none of them knew how to do it. The expert had three days to train twenty eight people. There was still no system for training people in the boning room eighteen months after the startup.
Fitters complained that, although they were trained in the new systems, it was not long enough and they were not able to keep up with developments in their fields through company sponsored training. If they wanted to keep up with the technology, they had to pay for it themselves in their own time.

8.6 *Summary*

Plant 3 was the least successful of all the plants but this was not any reflection on the quality of the butchers employed on the chains there. It was rather a reflection on the high levels of mistrust that pervaded the plant at all levels. Like Plant 2, Plant 3 had a GM who had little understanding of the day to day running of the MSH. The Assistant Manager,, who had been at the plant for thirty years, and who had a very autocratic style, ruled the MSH with an iron hand. Little power or discretion was allowed to the MSH Senior Supervisor or to the chain supervisors. There was a great deal of mistrust and antagonism between production and engineering staff at all levels and the Chief Engineer, like the Assistant Manager, had an autocratic style, delegating little authority to make decisions to his technical staff.

There was very little training for staff manning the new chains or for the technicians expected to get the system running smoothly. The catchment area for Plant 3 was a small town and the plant was the major employer in the town. There was a history of relatively little overt industrial conflict but the butchers were resentful of what they saw as the company taking advantage of their compliance. The butchers had responded well to the company's offer of a "new way" of participation with the advent of the new technology but when this failed to transpire, largely due to the refusal of the Assistant Manager to countenance such moves, the butchers were very upset. They felt betrayed and when major problems developed with the new systems, the butchers made little effort to assist. The lack of respect and trust felt by the Assistant Manager for almost everyone else in the plant led to low delegation to supervisors below him and to the butchers. Their traditional feelings of ownership of the plant were severely eroded and all the staff, both technical and production relapsed into the use of the formal system of communication and problem solving.

This negative spiral was not able to cope with the the implementation of the new systems.

Postscript

The stated reasons for installation of the new system were, in common with the other plants studied, economic. These economic reasons included factors such as increased productivity through reduction of unit costs and manning and increased throughput. However the continuing problems with the "carousels" have brought about a negative attitude to the technology amongst many production and engineering staff. Some doubt the validity of the technology and question the reasons for installing it.

These views are echoed by one of the engineers:

> **"The carousel was forced on us by Head Office.....I think they put the new technology in to get rid of people rather than to become more efficient. I think that sometime they'll take it out and put cheaper labour in."**

The company still runs a system using the "carousel" successfully at another, smaller plant. The relative success of this plant is attributed by management at Plant 3 to the fact that the other plant is a small, single chain plant which remains open all year round and is described as having "a family atmosphere." This plant was not part of this study but I was able to interview a foreman from there who was visiting Plant 3 to help them with their ongoing problems. In the small plant, "family" context, the technology appeared to be working well and they had few problems with it. This foreman could not understand the problems at Plant 3 but guessed that it was something to do with

> **"the horrendous atmosphere here. I'm amazed that they can produce anything here at all. I'd hate to work here and I can't wait to get back to my plant, it'll seem like a holiday after this."**

Chapter 9: Case Study of Plant 4

9.1 *Background*

Plant 4 was the biggest plant in the study. It had six chains, a killing capacity of 20,800 per day and employed 1800 people at the peak of the season. It was one of the first freezing works established for export in New Zetland and there had been ongoing processing there for almost 100 years.

The Plant 4 site was very large, almost like an industrial village with buildings scattered around, some new but most old and run down. Unlike newer plants which are designed as an integrated whole, it had grown and developed in an organic manner as processes have been added and output has grown over the years.

The story of the change at Plant 4 is much more complex than those at the other plants, even Plant 3. In some ways this is a reflection of the sheer size and complexity of the plant and the MSH themselves, but is also a reflection of the larger number of more powerful personalities involved in the change process. Because of this I will vary the structure of this chapter and relate the "story" of the change process in a holistic fashion, before returning to the structure established in the previous chapters.

The mutton slaughter house (MSH) was a relatively recent addition, constructed to replace the old building which did not satisfy hygiene requirements, and the chains are unusual in that they are raised up in the air on a platform to accommodate services such as water, steam and electricity. The building was three stories high with both internal and external staircases and also housed the fell mongery and associated processes.

Inside, the MSH Supervisor has an office high up on one wall giving him a good view of the entire chain area. Looking across the six chains, the observer views a sea of stainless steel and white clad figures, with carcases by the hundreds moving relentlessly down the disassembly process. Walking up and down the chains are people with different coloured hats denoting foremen, MAF inspectors and so on. Mechanical noises fill the air, punctuated by clangs, shouts, singing and the occasional roar of laughter or derision from people on one chain when the adjacent chain experienced some mishap. Overlaying this was the smell and sight of blood and body parts. At the height of the season this was a major operation with over 500 people working in here. The size and scale of the activity was daunting to the newcomer. It became clear that this was also true for some of the people in charge of the operation at that time.

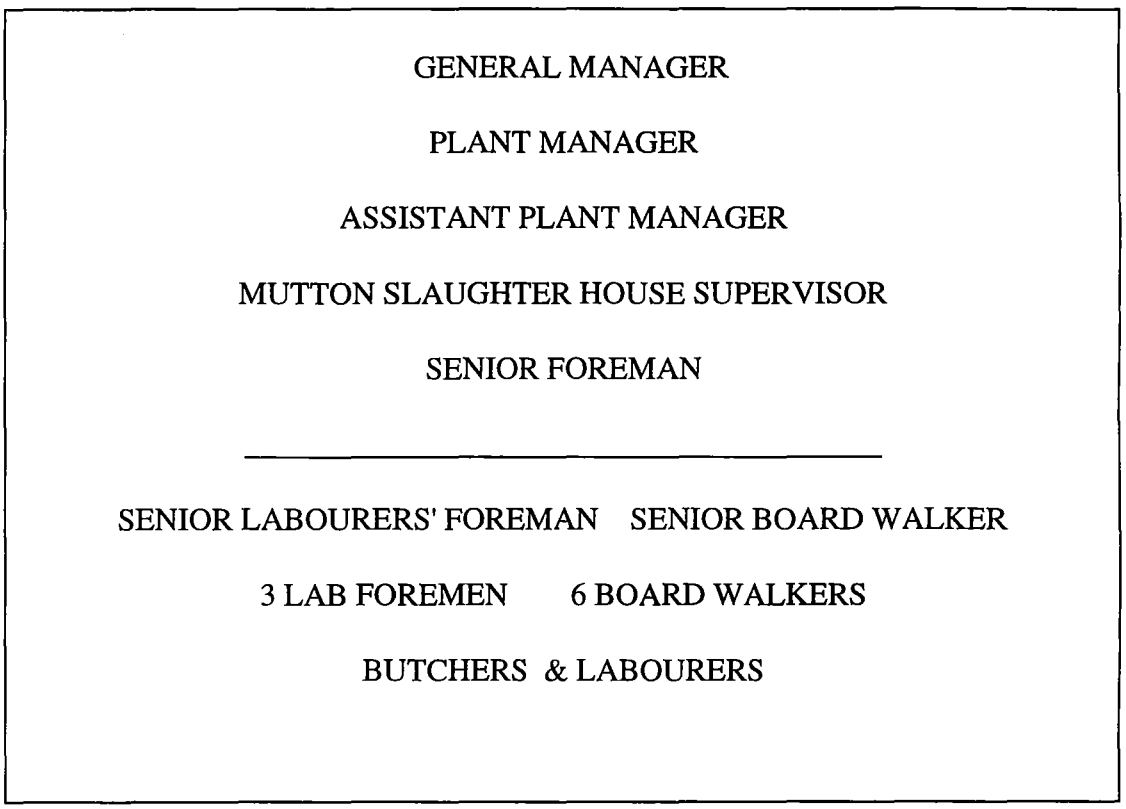
Plant 4 was set on the outskirts of a city with a population of 50,000. The workforce did not have the same kind of local loyalty for the plant experienced by smaller plants in smaller, single industry towns. Many employees spoke of the negative image that being a freezing worker evoked in the city where other forms of employment existed. This image was not just of workers on the chain, it also affected recruitment and retention of foremen and middle managers. As one middle manager noted:

> **"This place doesn't have a good reputation - I don't like to tell people I work at Plant 4. This makes it difficult to attract the best people, especially those in middle management. Those who do come often don't stay long."**

The size of the workforce also contributed to the feeling of being "just another worker", of being able to lose oneself in the general numbers.

The size and complexity of the whole plant meant that the General Manager was a remote figure in charge of five separate businesses: Mutton Slaughter, Beef Slaughter, Fellmongery, By-products & Pet Foods, Group Developments (at a separate site). As well as this there were separate engineering, industrial engineering, administration sections and so on. In the MSH there were eight layers of management hierarchy (see Figure 9.1).

Figure 9.1. Organisation Structure at Plant 4 Mutton Slaughter House



The General Manager had little to do with the day to day running of the MSH This was delegated to the Plant manager and Assistant Plant Manager and then to the MSH Supervisor. This extended chain of command allowed communications among the different levels of the hierarchy within the MSH chain to become distorted. Communications between the MSH and other sections such as engineering were similarly distorted. Relationships and channels of communication had become

institutionalised and routinised. It was difficult to overcome ongoing problems informally in this sort of situation. For example, industrial relations were conducted through company and plant Industrial Relations Officers and full time union officials who did no work other than union business.

Union delegates from the different sections around the plant spent most of their time doing their jobs with a little time off for meetings, settlement of disputes and so on. In the MSH, however, the butchers' delegate, although always dressed for work as a butcher, spent his time conducting union affairs in such a way that he very rarely did any work on the chain. The managers did not like this but felt powerless to do anything about it.

Communication between the union and management tended to be through official letters and meetings. This formalisation meant that it took a long time to find solutions to problems, which was particularly problematic during the trial period for the new technology when many small matters came up hour by hour and on a daily basis which needed to be resolved quickly. This situation was exacerbated and exploited by the butchers' delegate at the time who very cleverly and successfully slowed down the process of introduction.

9.2. *Success Measures*

Plant 4 took 3.76 years to pay back the original investment and a year to reach its target of 95 per cent of possible kill on the new chains. The number of butchers manning the chain dropped from 50 to 40 but the number of labourers increased from 18 to 23. This was because the company successfully managed to negotiate the reclassification of former butchers' jobs to that of labourer. They also needed more

labourers than previously because of extra work needed to "save heads". This refers to an initiative taken by this plant where they had found a market for heads overseas. Normally, the heads went into the bone meal process to be turned into fertiliser but this market for the heads added enough value to justify extra labourers to deal with the extra work involved.

Plant 4 had the advantage, as did Plant 3, of being able to benefit from the prior experience of another company plant installing the same technology. The company used Plant 2 as a test bed for the new system but although the technology may have been the same, the human component at Plant 4 was very different. Unlike Plant 2 with its cowed work force and autocratic Senior Supervisor, Plant 4 was dominated when I first went in there by the butchers' delegate. Part of the cause of the early difficulties experienced by the plant stemmed from the actions of the butchers' delegate who almost singlehandedly waged a running battle with management over the progress of the new chains. In order to understand why he was able to be so successful at frustrating the objectives of the plant management we have to look at the context in which he acted The following account is compiled from a vertical and cross functional slice of the people involved in the implementation and how they perceived it.

9.3. *Problems in the Mutton Slaughter House.*

> **"Plant 4 is the last of the dinosaurs. It's too big to control properly - it's out of control." (MSH Senior Foreman)**

The trial period was not going well in the mutton slaughter house. The new MSH Supervisor was not achieving what was expected of him. The Chief Executive Officer from Head Office had been down and put pressure on to get the problems

sorted out. At a meeting he addressed union delegates and officials from all the unions represented in the MSH and with the change and spoke of the need to adapt, asked for their help and spoke about them all working together. To the workforce this was not much different from the usual state of the nation type speech given at the start of each season by the General Manager but there did seem to be more urgency than usual.

The Senior Foreman was aggrieved because he had twice been put in acting command of the MSH only to be superseded by others being brought in from other parts of the plant - the latest one being a younger person chosen by management from another department and put on the fast track to senior management. The company had a policy of selecting likely looking young foremen and fast tracking them through various roles in the plant. The reaction of the Senior Foreman was summed up by his attitude of "why should I help this guy - what's the company doing for me? I'm not going to go out of my way to help him look good."

The MSH Supervisor who was in charge at the beginning of the change was just one such of these "fast-tracked" young managers. With no help from the Senior Foreman the situation became chaotic as his lack of experience and support became only too obvious. Other foremen[1] revealed that there was a lot of bad feeling and low morale amongst the foremen which arose from the perceived arbitrariness of management decisions. No-one seemed to know why decisions were made and felt that often the wrong ones were made from "higher up the ladder." Foremen were still resentful over the restructuring that took place 18 months previously, where a number of them were laid off. They felt that the management had laid off the wrong people,

[1]. The terms "foreman" or "foremen" rather than "foreperson" are used to comply with plant usage.

the best people. The foremen considered that if the MSH had to be restructured then there were some obvious people whom it would have been better to get rid of. A senior manager commented:

> **"They are pretty demoralised at the moment. They had the enthusiasm knocked out of them 18 months ago when we restructured the mutton complex and made some of them redundant. [The General Manager] picked who would go and unfortunately he chose some who were better than others who remained.**

The butchers also had little confidence in the new, fast-tracked manager brought in to oversee the implementation of the new system at first. This feeling was summed up by one butcher who said:

> **"He doesn't know his arse from his elbow. He should never have been put in charge."**

The butchers were affected by the low morale of their managers and they displayed little inclination to make the new system work by becoming active in problem solving.

One group of butchers expressed it this way:

> **"we're not particularly interested in making it work anyway - what's in it for us? If it breaks down we get to work on chain three or four. We're getting paid more under the trial than we were before. So the idea is to string it out so we can get even more (in negotiations)."**

Fewer foremen on the chains led to complaints from the foremen that the chains suffered from under-supervision. They were over-loaded and couldn't control the production process properly. They complained about this but it fell on deaf ears. One senior manager revealed a distinct lack of appreciation of their plight when he commented:

> **"Most of the foremen in the mutton complex are not very good. Their complaints of under-supervision are really to do with their lack of ability."**

So the MSH spiralled out of control with the MSH Supervisor isolated and his second in command "working to rule" with very low morale.

At the same time the butchers' delegate was making life difficult in terms of the commissioning of the new technology on chains one and two. The freezing workers' union were well aware of the political problems of infighting between the senior MSH management and the negative attitude of the foremen towards the company. The delegate exploited this as much as possible. At this time the freezing workers' union was the only coherent force in the MSH. They had waged a tough eight week company wide strike campaign for a redundancy agreement which they thought would protect them in the event of job losses from new technology. In the event they found it was no protection at all. The freezing workers' union thought that they would be able to claim redundancies for those displaced by the new technology. The company instead used a policy of attrition and denied redundancy to those who wanted it.

But the delegate saw that the company management had one weakness. They had a firm deadline for the introduction of the new system and the union exploited this by delaying introduction and holding up implementation as often as they could. Doing this they gained a secret deal from management where some butchers with higher seniority were paid off but re-employed at the bottom of the seniority ladder. The butchers saw this as a victory but management viewed their tactics as being at best peculiar and irrational.

Senior management decided they had to do something about the situation. First they moved the MSH Supervisor out to another department and brought in a replacement. He was an older manager who had been second in command of the

MSH a couple of years previously. He had been promoted to the position of Manager of the beef slaughter house but was now brought back in as the senior person in the MSH to sort the situation out. The Senior Foreman was left in place. He now had experienced being passed over twice for promotion for the top job and his morale sank even lower. On my second visit the new MSH Supervisor was in command but he was a very unhappy man. I originally found him very difficult to interview and uncooperative. When I did finally manage to sit down and talk to him what was intended to be "only ten minutes - I'm a busy man" became a fifty minute interview. His stress, even though he was by far the most experienced manager in the MSH, was very obvious. Like the foremen he blamed plant management for making arbitrary decisions with little notice or consultation. He was especially bitter about being forced to come back into the MSH - especially as the person he replaced in the MSH was given his job in the beef house:

> **"The [MSH] floor is going reasonably well but I fucking hate it here - I don't care who knows. This place is a nightmare and there's no support from my second in command. I was bulldozed into it - the feet cut from under me. Just before going home on Christmas Eve I found I was to be transferred from the beef house to the mutton slaughter house. I had no chance to discuss it with my wife - I had no choice. They talked about the challenge and all that bullshit but I've had enough of challenge here - I lost one wife because of it. This is the way they reward 28 years of service. I'm just thrown in here and left to dangle in the wind."**

His position in the beef killing section had been relatively easy, with only 80 people to manage and an operation that usually worked smoothly. The number of animals going through is much lower, with only one chain running at a much slower pace and a different set of butchers.

His attitude towards senior management was echoed in his feelings about the butchers under his command:

"I was happy on the beef floor - the men are different there - they want to work. Here I've got 400 - 500 ratbags. They're just here for the money."

And:

"It's a can of worms. This floor has the worst attitude in the whole plant - there's no co-operation. They're only here for the money."

In addition to replacing the inexperienced MSH Supervisor, senior management decided to get rid of the delegate by waiting for a chance where they could discipline him or even dismiss him. They hoped this would also give the butchers a sharp reminder at the same time. In the event, it was alleged that someone saw the delegate, supposedly at a union meeting, at the local race track. When the delegate was sacked for this, over 100 butchers, almost half the number employed at the time (The chains were being run down prior to the holiday closure and all six chains were not running), walked off in protest. They were immediately dismissed. All but seven, who had the worst work records, were re-employed but they had to all submit to the condition of re-employment only under a final warning and a 95% attendance record. This was aimed at addressing the chronic problem of high absenteeism rates among some of the butchers. It had been difficult to deal with this because of the refusal of the butchers' delegate to countersign disciplinary warning notes. Now if any of them failed to turn up for work with no reasonable excuse, they could be fired.

These events took place around Christmas and the summer holiday. Management bided their time and the delegate was sacked in the last hour of the day as the men finished up before Christmas, making it hard for the butchers to even know what was happening. By the time they reassembled after the break, found out what had happened and called a stop work meeting, some of the heat had gone out of the

issue and the men were split over what to do about it. The plant freezing workers' union President told them they couldn't strike over this matter - it was illegal under the current contract - he advised them they would have to leave it up to the union to sort out through a Personal Grievance dispute for unjustified dismissal with the Tribunal. Many men went back to work (in fact many did not even know there was a meeting and continued working) but approximately 107 decided to walk out.

This situation was quite unique. The butchers had lost their greatest weapon - solidarity. Their union also lost the opportunity to have the affair settled while the situation was still a "hot" issue and they could be assured of backing from their members. The freezing workers' union officials felt they had a good chance of winning a personal grievance for wrongful dismissal and that this could be dealt with quickly through the mediation procedures in the Tribunal. However the company, through technical circumstances, were able to refer the dispute to the Employment Court which meant that the case would take six months to be heard. The company was confident it could win but even if they didn't they had gained some valuable time to operate without the delegate's presence and for the heat to go out of the situation.

Another factor was that the plant freezing workers' union hierarchy was not as solid as it seemed and this was known to the management. The delegate and the full time officials had in the past fallen out and once the Auckland officials had to call in a mediator to sort out a problem between the delegate, themselves and the plant officials. The deputy butchers' delegate was voted in as the new delegate and he was viewed by the management as being much more moderate and "realistic".

The effects of the management's moves, both in replacing the senior people in the MSH and in dealing firmly with the delegate, were almost immediate. Only a few

weeks after, the chains had settled down and appeared to be working more smoothly. In the words of the new delegate:

> **"It's more disciplined on the chain now - because of things like the sackings and final warnings. The Union President and I had to eat humble pie to get some of the butchers re-employed. this is not what butchers are used to at all."**

The labourers watched all this happening with mixed feelings. But overall they felt that it was about time the butchers were pulled into line and they felt there was some justice in the sackings. Traditionally in freezing works it was the butchers who hold the reins of power. They can outvote everyone else because they have the numerical advantage. Labourers, although paid quite well by external relativities receive approximately sixty percent of a butcher's wage. Many of the labourers were at least as skilled as some of the butchers and some of the tasks performed by labourers - for example detain rail trimming -require more training and skill than some of the butchers jobs. There was a wide range of skill levels required for the different tasks on the entire chain and the division of them between labourers and butchers tasks varies between plants and seems to follow no discernible rationale.
So some of the labourers were not too unhappy about what had happened to the butchers. As one of them explained:

> **"The labourers have always been looked down on by the butchers over the years but we have to work just like them and nowadays a lot of the work they do is not as skilled as what I do.**
> **When the company sacked the delegate and then all the butchers it was good because it let them know things have changed now. It's about time all the old humbug was got rid of. We never used to know if we were going to work on any day because we'd often get here and find there was a stop work meeting and then we'd have to go home."**

9.4 *Construct Factors Affecting the Change Process*

9.4.1 *Trust*

Plant 4 generally had a lower frequency and percentage of negative Trust factors than did Plant 3, except for the factor "mistrust employees" which was double that for Plant 3. This could be explained by the much more active and militant union presence and the institutionalised nature of the labour relations there which had evolved into a culture of conflict. In other words, at Plant 4 it was the norm for managers to distrust employees because they were always in conflict mode.

The scores in nearly all categories were considerably higher than in Plants 1 and 2, except for the factor "no confidence in employees" which was approximately similar.

When the new technology implementation process began, the leading actor on the MSH stage was the butchers' delegate. His mistrust of management actions and motives was total. He saw himself as the champion of his members, fighting a continuous war against a powerful and wily adversary. His feelings about management motives amounted almost to paranoia at times. He told me that:

> **"You have to fight for everything here. If they could they'd have us working for nothing. This is part of a nation-wide plan by the Meat Industry Council [MIC] to break the power of the unions. [The Industrial Relations Officer] is told what to do by head office and the MIC."**

He was uncompromising in his determination to wring the best deal possible for his members from the company. He did not attempt to stop the new technology being implemented but did his best to slow it down and to use the strategic power to best advantage. He knew that the company was vulnerable as it had invested a great deal of money in the new systems and they had to make them work as quickly as

possible. He wanted to make sure that his members were adequately compensated and that they got their share of the increased profit.

> **"I won't co-operate with anything I'm not forced to unless the company are prepared to pay top dollar for it. This new technology means more profits for the company so we want some of this. I don't believe all this stuff about closures - that's just scare tactics. If they wanted to close us they would anyway, no matter how efficient we were. We could pay to come to work and they'd still close us if it suited them."**

He felt that the only approach with management was to take the hard line at all times and to push them right to the edge otherwise "they'd be all over you." There was also a lack of trust between the delegate and the full time plant union officials, the President and Secretary. The delegate felt that they didn't care about the welfare of the butchers because they were not butchers and their power base lay in other areas of the plant. He felt that they were jealous of the butchers because they received the highest pay in the plant. He felt they were weak and that they were prepared to co-operate with the GM and the Industrial Relations Officer (IRO) too much. Because of these factors, his trust of them was low and he had little confidence in their ability to negotiate well with the Industrial Relations Officer, who he deemed to be very clever.

The President and Secretary confirmed that there was a lack of trust between them and the delegate. They found him very hard to control and regarded him as "a bit of a loose cannon". They told me that they had had to call in a mediator recently to talk their way through an impasse caused by the delegate refusing to follow a majority decision of the union management team.

They felt that the delegate's negotiating style and general tactics were not very constructive and they themselves felt they could relate to the IRO in a positive fashion, without continually using confrontational tactics. However, the union

officials themselves exhibited a high degree of mistrust of management and their motives, although not as extreme as the delegate's. They felt that Head Office did interfere and that they were lied to regularly by Head Office managers. They also felt that the climate under the new industrial legislation was becoming excessively legalistic. Head Office employed specialist lawyers and they felt out of their depth to deal with this. They felt the company had started to use "dirty, filthy tactics" to cut pay and conditions for people at the plant but still felt that they could work out a deal with the IRO and the GM as they perceived, unlike the delegate, that the threat of closure was real.

The butchers had little respect for the GM or the management hierarchy. Many of them felt that management had no real regard for their employees "except as money earners for them". The MSH Supervisor who was there when I first visited, the one who was on the company fast track management development programme, was widely regarded as being incompetent and out of his depth with no understanding of even the most basic procedures in the MSH. He was seen as a sycophant who "played up" to the GM and was known as the "boss's little dog." This view was shared by many of the foremen who also felt that management further up the ladder were, at best, irrational and liable to make incomprehensible and bad decisions that affected them and the way in which they carried out their work.

The foremen in general felt that they were badly treated by management over the restructuring of the MSH and the choice of the new MSH Supervisor. Neither did they like the way in which the senior managers worked, feeling that they were always in the dark. As a group of them said in reference to the restructuring:

> **"The trouble is that we never know what's going on. Everyone seems to be saying nothing or else trying to stab someone else in the back. It's bad in here."**

They felt that this lack of direction and cohesion amongst management was the factor that allowed the butchers' delegate to be so successful at slowing down the implementation and causing trouble.

The senior management and the IRO did not trust the butcher's delegate and felt he was a "stirrer and trouble maker", bent on causing as much disruption as possible. Problems with the new technology were attributed to various personal characteristics by some managers. Plant 4 had a higher percentage of Maoris [40%] working on the chain than the other plants and some managers held the view that

> **"Maoris don't have a good work attitude. They tend to work for the day - just get enough to go to the boozer that night. A white guy will generally put half in the bank and be thinking longer term."**

The new systems were installed on chains one and two which were manned by the most senior butchers. Seniority was gained through the job tenure so, especially on the first chain, the average age of the butchers was much higher than on successive chains. Some foremen and senior managers felt that these butchers were

> **"Just too old to do the job - old crocks - can't adapt or move fast enough but won't get out of the way because the pay on the new systems is higher."**

Senior management's views of the abilities of the foremen on the chains was negative. As the IRO said to me, responding to questions about problems raised by the foremen after the restructuring:

> **"They tend to rush around trying to supervise each person. A foreman shouldn't have to do this. The problem is that they see themselves basically as timekeepers and policemen."**

The engineering staff responsible for the implementation complained of inadequate training and harassment from the butchers. They alleged that butchers would deliberately sabotage machinery and act in a very unhelpful manner when the fitters appeared to rectify a problem. Some fitters expressed resentment that they received less pay than the butchers, especially when they had overtime cuts when the company eliminated preventive maintenance in an effort to save money. They also resented the fact that the union were able to force changes to be made to the spacing on the new technology and also insisted that this had to be done at night because of the noise and fumes. This meant that the fitters had to work in the evenings for little extra pay.

The fitters felt let down by the plant management who they perceived to be taking their loyalty and commitment for granted while offering no rewards for this. Communications between the Chief Engineer and his staff were poor and he was viewed as a remote and ineffectual person who did nothing to help them. They complained that they were under-resourced and did not have enough training in the new technology to be able to keep on top of the problems as they occurred. I found that there was a certain amount of fear of each other and their foremen among the engineering staff. It was difficult to induce some of them to talk openly in front of their peers. But several times, fitters would pull me aside into some out of the way space to tell their story "like it really is." When I asked what it was they were afraid of I was told that they were worried that if they were known to be complaining, and this got back to their superiors, then they would be liable to be passed over for overtime, any training that was available and also could be chosen if there were any more staff cuts in the future. It was alleged that some of their peers would "rat" on

them to the boss if they were overheard detailing their complaints. The Chief Engineer had favourites and these were the ones who would report back to their superiors. I was unable to get the names of any of these favourites but I did find one fitter who said that there were quite a few "whingers" among his peers but denied any favouritism. However, the level of stress and distress among some of the fitters appeared very real. At best there was not a healthy, positive relationship between peers and between the fitters and the Chief Engineer. The Chief Engineer refused to discuss any of this at all and was generally uncooperative with this research process, reporting only that things were going along as well as could be expected and that problems were caused by the union, and did not stem from any real technical aspect of the new systems. He did say that there was a lot of pressure on him to get the system working and this was confirmed by the Second Engineer.

There was also a high level of conflict and mistrust between the MSH management and the MAF inspectors. MAF inspectors were there to check contamination on carcases. There were different kinds of contamination, mainly disease and blood spatters on the carcase. The trial period for the new systems tended to produce more of the latter type of contamination than usual. The usual solution for this was to either ignore it if it wasn't very big, it would get washed off anyway at a later stage, or to tag the carcase, reroute it onto the detain rail where a labourer would trim off the meat contaminated with blood spatter and send the carcase on its way. This process appears fairly straightforward but in fact the MAF inspectors have a certain amount of discretion as to what they label contamination and what they allow to go on and just be washed off later. At Plant 1 the inspectors were also able to exercise the option of not only examining the carcase and deciding whether there was

contamination or not, but also trimming it off themselves if contamination was discovered so that the speed of the chain was affected very little.

At Plant 4, MAF inspectors were believed by the MSH Senior Supervisor, and many of the other supervisory staff in there, to be deliberately "working to rule" in a way which constantly slowed the chains down or even stopped them as carcases were tagged as contaminated with the slightest amount of blood spatter and routed off the main chain onto the detain rail. The higher than usual incidence of contamination because of the trial period with the new machinery and system meant that the detain rail would frequently become full which meant the chain had to stop as soon as one more carcase was tagged as contaminated. Not only did this increase the contamination statistics, it also meant that throughput was affected, making the efforts of the foremen to bring the chain up to full tally even more difficult and making them subject to more pressure and criticism from further up the hierarchy.

The MSH Supervisor was seen having several heated arguments with MAF inspectors on the chains in front of everyone else, one of which I witnessed. These confrontations would result in the MAF inspectors complaining to their boss who would in turn complain to the Production Manager. I was also present in the foremen' smoko room when a MAF inspector, whose smoko room is adjacent, came through the door saying that their microwave oven wasn't working, could he use their's to heat up a pie? Several of the foremen leapt to their feet and told him to remove himself forthwith in very colourful language. They told him never to try to enter their space again. When asked why they reacted like this they said:

> **"Those bastards won't cooperate with us so there's no way we're going to help them."**

In general, trust between the levels of hierarchy was very low in the MSH and there was a great deal of evidence of a lack of mutual respect and confidence between different levels and functions. There was also conflict and lack of trust between the hierarchy in the union, each faction feeling the other was not taking an appropriate stance on the issue of implementing the new technology and their members place in this.

9.4.2 *Integration*

Like all the plants, Plant 4 exhibited evidence of integration through informal communication and problem solving. However, as has been amply outlined above, Plant 4 was predominantly characterised by formal communications and formal problem solving. The Production Manager, who had been Production Manager at Plant 2, complained that:

> **"Communications are difficult here. Everything has to be official - I can't do anything without it going through the system."**

I asked if he thought this was a function of the size of the operation compared to Plant 2 and he commented that:

> **"It's not just the size - people don't want to communicate here - the spirit of the place is different [to Plant 2]."**

He felt that a major difference with Plant 2 was that the union were much more militant and there was a great deal of confusion in the MSH caused by inexperienced senior management in there and demoralised foremen.

When problems occurred on the new chains it often took some time to correct them. This was partly a result of having fewer supervisory staff because of the

restructuring of the MSH. As we have seen, senior management felt that it was the poor skills of the foremen and not their lack of numbers which led to their not performing well. This response only added to the foremen' resentment and made them take the attitude "Well the company doesn't care about us, so why should we care about the company?". So they tended to "work to rule". Another factor was that the butchers tended to refer to their delegate first when certain kinds of problems occurred, such as safety problems. Butchers would approach the delegate who would in turn talk to a foreman. The foreman would relay this to the Senior Foreman who would then inform the Production Manager. It would take some time for this to translate into concrete action and this could result in the delegate ordering his members to stop work on the grounds of safety. Under the prevailing industrial legislation, stopping work was illegal except on the grounds of health or safety so the delegate saw these situations as opportunities to put pressure on management. The length of time it took to examine safety problems played into the hands of the delegate, extending the trial period and costing the company money.

Fitters were not authorised to stop the chain themselves to work on a mechanical problem. When such a problem occurred, the foreman would call a fitter on a "walkie talkie" internal radio system. The fitter would come and examine the problem and usually would receive little help from the butchers who would typically stand around watching. Butchers on the other chains would start yelling and taunting everyone there. If the fitter decided he would have to stop the chain, he would have to find the MSH supervisor to ask permission. Before he could give this permission he had to obtain clearance from the Asst Production Manager. Once the fitter was able to start work on the problem, he may find that he needed to call in his foreman

and even the second engineer. The Chief Engineer very rarely appeared. One complicating factor was that the MSH Supervisor had no experience of the operation there and was not able to make decisions without advice from his subordinate foremen, especially his assistant. They had no intention of helping him in this way as they were so disaffected by the perceived treatment they had received from the company. So no-one wanted to make a decision and the most senior person was unable to make a decision, even if he were authorised.

This extended and cumbersome process stands in stark contrast to that in Plant 1, where, as soon as a problem began to emerge, the butchers would call out to the foreman who would immediately summon a fitter. They could stop the chain and take any steps necessary to fix the problem. They would all work on it together and often the senior engineers would turn up without being asked to see if they could help. Once the problem was fixed, the fitters would drop in from time to time to see if everything was working properly.

The situation described above at Plant 4 affected the first four months of the trial period, until the MSH Supervisor was replaced by the much more experienced person brought back from another section of the plant. He was able to decide when something was really serious and could also help to advise on solutions to problems. He, unlike the previous MSH Senior Supervisor, spent a great deal of time walking around the chains, talking to chain foremen and trainers. This helped to prevent small matters escalating into large problems and this curbed some of the ability of the butchers' delegate to exploit every opportunity to slow the process down.

In general, however Plant 4 suffered from highly formalised communication and problem solving processes, exacerbated by the poor morale and attitude of key

supervisory staff and the failure of more senior management to recognise their contribution to this situation. This allowed the butchers' delegate to exploit the circumstances to the detriment of the change process during the first six months.

The atmosphere did improve after the senior management signalled their determination to make the new systems work when they fired the butchers' delegate and appointed a new foreman on chain 2, promoted from the ranks of the butchers. We will describe this more fully below.

9.4.3 *Empowerment*

We have already canvassed the cumbersome formal problem solving and communication systems at Plant 4 above. Staff were not expected to display initiative and the low morale and formal systems tended to mitigate against this. The new technology agreement meant that the management had to try to obtain the input of the butchers when planning the new systems but with little success. The culture and history of conflict and the low trust made it difficult for either side to engage in any meaningful sharing of ideas.

The low morale of all the supervisory staff in the MSH contributed to a feeling on their part that the company did not care about them and did not value their contribution. They were also allowed little discretion in decision making and the extended lines of control and low morale meant that individuals were not willing to take responsibility, always referring problems upwards. In their turn, senior managers tended to blame their lower level foremen or the butchers for any problems.

The technical staff complained of a lack of resources and training so that they felt unable to perform their jobs adequately. They too felt resentful towards the

company for a loss of overtime and they also experienced poor communications among the technical staff coupled with the fear that they may lose their jobs. The technical staff were supposed to learn the new skills and knowledge connected with the new systems from the people installing them. In the event this was not very successful. Right from the outset, there were problems between the installing company and the Chief Engineer, who felt under pressure from the GM and Head Office to finish the installation as quickly as possible and who was not happy that outside contractors had been brought in to install the new systems. The Chief Engineer and the contractors continually failed to create a meeting of minds and this led to mounting frustration until there was an overt dispute between the senior installing engineer and the Chief Engineer resulting in the Chief Engineer ordering this person off the plant. This caused tensions between all the people involved and the plant technical people learnt very little.

When the systems were installed and the trial began, the technical staff had gained little knowledge of how it was supposed to work and this added to the widely held perception that the whole process was out of control. A combination of resentment, lack of confidence and the formal systems made the fitters and electricians very apprehensive in dealing with the new systems and unwilling to take any risks in dealing with breakdowns and problems.

Training for the butchers was rudimentary and was mainly carried out on the job. This was not entirely the company's fault. The company had suggested a training scheme but the butchers refused to accept it as the company would not agree to their pay demands for this training period. Ten senior butchers were appointed as trainers after going to see how Plant 2 was using the new system and foremen were all

sent to see the new system working and to talk to their peers at Plant 2. But many of them felt this was completely inadequate as a preparation for running the new systems.

The union complained that there was no real consultation over the new technology. They had simply been informed. In the words of a senior union official:

> **"The company's way of consulting was to talk to us for a day - this was the consultation - then we'd negotiate for a day, mainly about manning - then if they didn't get what they wanted, they'd simply try to enforce their way on us."**

This process ended in a series of injunctions and counter injunctions in the courts which were usually won by the company. The union was particularly incensed that the company ignored the requirement in the new technology agreement for consultation over any changes. To the union this meant that the company had to ask them for permission. However a ruling from the court, sought by the butchers, meant that consultation consisted of informing them, asking for their opinions and then the company making a decision, whether the union agreed with this decision or not. Butchers also complained that the new systems were set up simply on engineering contingencies. Little attempt was made to find out what they thought or how best to fit the system around their needs as the people working on the system. Instead they felt they had had to fit into the system.

There were few attempts at co-operation at Plant 4 between butchers and foremen or technical staff but there were instances where butchers would try to tell engineers how to solve a problem and being completely ignored. The carcases on the new chain system hung head down from overhead tracks, with each leg secured by a hook. The degree of curve on these hooks is critical as the carcases move through

various twists and turns. There were continual problems with hooks falling off or fouling up and jamming the chain. Some butchers told the fitters that the hooks needed a slightly different degree of curve ut they were told "you're just freezing workers - you know nothing." Eventually, hooks were brought in from another plant and were found to be different, in exactly the way that the butchers had said.

There was no consultation over many minor matters which caused a lot of ill feeling among both butchers and foremen. For example, as part of their cost cutting exercise, the company decided to stop supplying towels and tee shirts to the butchers and labourers. Working on the chains meant that people would often get splashed by blood and other parts of sheep carcases and a shower and clean tee shirt was something they regarded as essential. They would hand in a dirty tee shirt and towel and receive clean ones in replacement. With no warning they found that they had to take their dirty linen home with them to clean. Not only were the butchers upset about this, the foremen, who had to deal with the angry feelings, felt they had been let down by the company again.

The picture painted so far is one of confused and demoralised staff, working with a system overwhelmed by the task facing it. However there was one outstanding example of a foreman taking the initiative and breaking through this disempowering barrier. Just before my last visit to the plant, chain 2 had had a new foreman appointed from the ranks of the butchers. This man had the chain running at full speed within seven days. He achieved this through a combination of high enthusiasm, refusal to follow the now established norm of negativity among his new peers and a positive approach to supervision. He put forward a challenge to his chain that if they were able to reach full tally before chain 1 and maintain this for two days

he would buy them a keg (50 litres) of beer. The butchers responded enthusiastically to this and began to work together to achieve the goal. They told me that they knew very well what was needed, it was just that they had never been motivated before. The butchers on chain 1, as soon as they heard about this immediately started to try to beat chain 2, even though they would receive no reward. This generated a great deal of good natured banter between the chains and the foremen and trainers on chain 1 were left floundering, trying to keep up.

At first, the other foremen attempted to bring the new foreman back into line by abusing him and trying to undermine his confidence. Most of this went on in the foremen's' smoko room. I witnessed several of these attacks and they were quite forceful but the new foreman just cheerfully abused them back, just as forcefully and refused to be daunted. I wasn't there two weeks later but I rang to find out what had happened and found that they had achieved the target and chain 1 was close behind. The production Manager explained to me that this was not as miraculous as it seems at first sight. Firstly, the butchers and everyone else now knew a lot more than they had before. Secondly, the butchers, following the removal of their delegate and the final warnings to many of them, were now in a more "compliant mood". This is true but there is no doubt in my mind that the new foreman ignored norms, culture and formal rules and broke through the stultifying atmosphere pervading the MSH. The really surprising aspect is that he was allowed to do this. It appears that, although the formal system appeared to be the cause of the lack of empowerment and pro-active behaviour, in reality it was the norms of negativity reinforced by low morale which prevented people from being more proactive. The new foreman, according to himself, "Just wanted to have some fun and see what we could do."

There was little evidence of the kind of autocratic rule like that at Plant 3 but empowerment was low at Plant 4 more because of systemic and situational factors. The history and culture of confrontation, the lack of real consultation or training and the tendency of management to make arbitrary decisions, rendering supervisory staff resentful and angry, meant that, for the most part empowerment was not a condition sought by any of the staff.

9.4.4 *Ownership*

Plant 4 was not only the largest plant but it was also the only one situated in a city. There was a wide catchment area for staff and alternative employment at other places of work. There was none of the small town loyalty nor the history of being a local concern. Plant 4 had always been owned by a multinational company, from its inception nearly 100 years previously. The frequency of expressions of alienation were the highest recorded of all the plants. We have discussed the institutionalised conflict and norms of confrontation at the plant and there is no doubt that is a major contributor to the high levels of alienation and low trust.

The employees on the new chains felt that "management are always trying to put one over us" and the only sensible reaction to this was to "play dumb and get the delegate to force up our rates as much as possible. You can't afford to be soft with management or they'll be all over you." Some butchers expressed anxiety about the possibility of closure but most appeared to believe the delegate who averred that this was just management trying to intimidate them. Most employees on the chain felt little loyalty to the plant or the company. For much of the trial period there was little interest expressed in helping to get the system working. In fact many of the butchers

stated that they would do everything they could to slow the trial period down. They had no incentive to make it work as they were all paid a special rate, more than their normal rate, during the trial period, whatever the daily throughput. Another factor which none of the other plants enjoyed, was that if the new chains broke down, they could simply work on one of the four old chains which were still running while the new systems were trialed.

The butchers working on the new chains felt little loyalty to the management, the plant or to the company but they were very cohesive among themselves. They were proud of their strength and considered themselves to be the "kings of the plant". Because they had the largest number of people in their department, this meant they could generally get what they wanted from the union and make sure they got preferential treatment and attention. One butcher expressed it in this way:

> **"When we go to plant union meetings we always win because we're together and we've got the numbers. This makes us arrogant and staunch - the others don't like it but they can't do anything about it."**

However, the feeling of solidarity among the butchers did not extend to the union officials who they regarded as "wimpy". In their turn the officials, who felt little trust for management, felt that the butchers' delegate went too far and was too militant, but went along with what he did because they had little choice as the butchers had such a strong position in terms of voting power in the plant.

At all the plants butchers tended to see themselves as the most significant part of the work force on the chain, even though approximately one third to a half of the total were labourers. But at Plant 4 there were clear distinctions between the butchers and labourers, about half of whom were women. The labourers would be affected by any industrial action or problems on the chain. When the chain stopped or slowed

down, they would have to follow suit because of the sequential nature of the task. They regarded the butchers as "prima donnas" and resented the fact that butchers always defended their skilled rating and insisted that the labourers were unskilled. It is true that many of the labourers did not possess the skills of some of the butchers but on the other hand there were labourers whose jobs required them to exercise greater skill than did some of the butchers' jobs. The butchers' claim to be skilled was partly the result of their feelings of "staunchness and arrogance" but this was also the subject of fierce negotiation during the preparations for the new technology which deskilled certain jobs. The classification of a particular job as skilled or unskilled then was of great interest to the company, as labourers received approximately 30% less than butchers. In their turn, the union wanted to retain as many more highly paid positions as possible. In the event, at all the plants, management generally acceded to union demands and few butchers' jobs were reclassified as unskilled.

There was nothing like the cohesion of the butchers evidenced by the labourers, who instead just followed along with whatever the butchers wanted. However, several labourers expressed great satisfaction when the delegate was sacked and a large number of butchers were suspended then returned on final warnings. They felt it was "about time someone dealt with those people. We'll all end up out on the street if they are allowed to carry on all the time." The status associated with being a butcher and the attendant norms of cohesiveness, "staunchness" and militancy, did not exist among the labourers. For most of them this was just another job, whereas many of the butchers adhered to a hundred year old tradition and took pride in their strength.

We have seen that negative feelings about the company and about each other dominated the management in the MSH. There was little cohesion between most them but enough of the foremen worked with integrity to keep progress on the new systems moving forward, even though they were all thoroughly disenchanted with higher level decision making and the perceived contempt with which they were treated. Unlike Plant 3, they had the opportunity to try out new ways of working as for much of the time, with the new MSH Supervisor knowing little about either the new technology or the working of the MSH, there was effectively no-one in charge of the MSH during the trial period so they had to work out how to do it themselves.

The senior plant managers, the GM, Production Manager and the Industrial Relations Officer, displayed high levels of cohesion and solidarity. They saw themselves as beleaguered against the enemy in a battle for supremacy. At one point I was talking to the MSH Supervisor outside the MSH after a particularly gruelling fight with the union which had gone well for the managers. The GM came past and said:

> **"Well done, lad, you did a good job there. We won - we beat the buggers!"**

For them, the solution to the problems in the MSH was to become much tougher on the union. I was given every reason to suspect that the sacking of the butchers' delegate was a well orchestrated part of this "get tough" strategy. In fact this action appeared to work and it is from that time that the trial period with the new technology began to proceed more smoothly. Management finally called the butchers' bluff and found that they could win. This action was approved of quietly by

the labourers and the morale of many of the foremen improved as they felt that some kind of control was beginning to come back into the processes in the MSH.

In summary, feelings of ownership were very low amongst most of the staff at Plant 4 while feelings of alienation were the highest recorded at any plant in the study. There were feelings of being part of a team among senior management and the butchers but these feelings were not shared by the labourers or the union officials. Morale was low among the chain supervisory staff in the MSH but there was some degree of solidarity between them and they were often able to work with the butchers in a generally positive manner.

9.5 *Industrial Relations*

The industrial relations system at Plant 4 was a very different matter than at any of the other plants visited - mainly an effect of plant size but also a function of history, culture and the personalities involved. As mentioned above, relations were highly formalised, most communications taking place either at official meetings or by letter. This system was stretched to breaking point during the trial period when the butchers' delegate practised what management saw as a form of guerrilla warfare using hit and run tactics. While I was there on my first visit I was interviewing the butchers' delegate in the union headquarters, a rambling old building on the edge of the plant site. The management wanted to take the speed of the chain up by one carcase per minute as a normal part of the ongoing implementation, which was aiming at reaching the target speed. The delegate saw this as another opportunity to apply pressure to negotiate for more money. He wanted to call a stop work meeting to inform everyone about the intended new speed. This would have meant losing almost

half a day's production. Understandably the management, through the Industrial Relations Officer, wanted to merely tell the butchers through the foremen walking down the chain and talking to people as they worked and by way of notices. The delegate refused to countenance this and threatened to stop the chain anyway and call a meeting. These negotiations were carried on first by face to face meeting then later by letters being carried back and forth by hand across the plant site. Finally the Industrial Relations Officer informed the delegate that if he stopped the chain this would constitute an illegal strike and "the union had better be prepared to front up to the Court in the morning to answer for its actions." The company had already done this a few months previously and the court had issued a compliance order forcing the men back to work. They knew this would happen again and they had no chance of winning so at the last minute the delegate backed down. The other union officials had backed these actions of the delegate but they were relieved when the pressure came off. As this example and those in the previous section show, industrial relations generally was confrontational and the union had a record of winning concessions and imposing restrictive practices by using strong arm tactics.

The Industrial Relations Officer for the plant was the *de facto* Company Industrial Officer and this position was confirmed officially later in the year. There was a company wide industrial policy and the intention was to standardise tactics throughout the company to better counter the union's ability to co-ordinate action at a regional level.

The Industrial Relations Officer had come into the plant the year before with a mandate to identify all the work practices that needed reforming and to get rid of many of the restrictive practices that had grown up. This was not a secret agenda. A

survey of all workers was carried out and the results of this formed part of the "Blue Book" which listed all the practices, allowances and so on the company wished to remove and clearly set out in detail what the company wished to achieve. This was sent out to the union in January 1988 and clearly signalled the determination of the management to change the climate of industrial relations at the plant. The Industrial Officer commented:

> **"Industrial relations here used to be reactive. The Blue Book turned this around. We now had the information we needed so that we could initiate changes and not just react to union moves."**

The union reaction to this was predictably negative. At the time of the first visit the freezing workers' union officials at both plant and regional level expressed a high level of distrust of the management and their intentions. The union felt "they [the management] were out to screw the freezing workers." The management were convinced that the freeing workers' union, especially the butchers' delegate, were always planning "dirty tricks" and looking for ways to hold up the trial period.

The company determination to regain control of the mutton slaughter house was helped by their new ability to enforce compliance with agreements through the new industrial legislation. They also had a clause in their agreement with the freezing workers' union (Cl 30 - Operations and Methods) which obliged the company to consult with the unions about any changes to work practice. At the time this was negotiated the union thought it had reinforced its power to veto any changes they didn't like or to use their power to negotiate higher rates. The union invoked this right of veto when resisting the displacement of workers down to other chains and refused to comply. The Court ruled however that while Cl 30 of their agreement certainly said that the company had to consult with the union about proposed changes, there was no

obligation on the company to take account of any union views expressed and further that the union were obliged to comply withe company's proposals once they had been "consulted" with. This interpretation of the clause turned on the intended meaning of "consult". For the union this meant "consult and agree" but the court ruled otherwise. This incident served to reinforce the growing realisation in the union that the days when they could more or less run the plant as they wished were coming to an end. As the Industrial Officer said:

> **"The new legislation now allows us to enforce compliance with the Act. This is a fundamental change. For years the industry has been hampered by silly union restrictions which are the origin of the perceived union power."**

The Court ruling also added to the union's feeling that they were being "screwed" by the company.

As senior management sought to implement a new industrial relations strategy on one level, the ongoing conditions in the MSH served to hold back progress.

The confused situation in the MSH with demoralised foremen and a clever, militant delegate meant that the butchers would always turn to the delegate for information. In fact he often had a better idea of what was going on than the foremen did and so it was natural for the butchers to come to depend on the delegate for information. He was also a very able advocate and defence for them. For example the Code of Conduct of the plant and their Registered Agreement had a precise procedure laid down for punishing union members for transgressions against the rules. He pushed the rules to the limit by refusing to sign official written warnings to butchers. This meant that the whole system of written warning, then final warning, then dismissal was usurped and made unworkable. MSH management did not want to challenge him on this as they felt even more trouble could be caused. The confusion,

loss of morale and political infighting caused by perceived arbitrary decisions being imposed on the employees by higher management created a decision vacuum just at the time when decisive and energetic leadership was needed. The managers and foremen in the MSH simply tried to get through each day with as little trouble as possible. This vacuum was filled by the delegate. As the delegate pushed out the boundaries of what was possible, he grew bolder.

The freezing workers' union officials also found it hard to control him. His power base was in the senior butchers who encouraged him to gain whatever he could and felt he was doing a good job for them. The other officials were wary of this strength as the butchers, as in most plants, carry a lot of political "clout" and therefore influence who gets elected to the officials' positions.

The plant officials and some of the regional union officials had already had a major confrontation with him which had to be settled by their bringing in a mediator. Lastly, the officials agreed in principle with his resistance to the company and it was difficult for them to try to temper the delegate's actions without laying themselves open to accusations of being weak and so on. This was yet another vacuum which the delegate exploited to its full.

9.6. *The Change Process*

9.6.1 *Preparations for the Change*

The company had tried out the new chain system and automated machinery in a small single chain plant (Plant 1) to gain experience before installing it into a bigger plant. The relative success in the small plant encouraged the company to go ahead after only a few months of trial at Plant 1 and install the new technology at Plant 4.

The task of converting six chains at once was deemed to be too great so it was decided to convert in stages - two chains per season. Because of the success of the trial installation in the small plant and its accompanying publicity, the freezing workers' union and members were aware of the likelihood of the change at Plant 4 some time before the chains were converted. The national freezing workers' union officials did not like the labour saving implications of the new technology for manning levels but knew it was inevitable and there was little they could do in the long run to prevent its advent. They were also well aware that plants had to upgrade and become more effective if they were to escape restructuring and closure. The company promised there would be minimal, voluntary redundancies and staff involved in the new chains were to receive a 50 per cent premium on their normal wage. Instead of redundancies, the company said they would employ a policy of attrition so that no new hirings would occur in the MSH. The union argued that with an 18 per cent annual labour turnover, it would take only three years to downsize the work force, and therefore union members on the chain, by fifty percent. They also complained about people displaced from the first two chains being put down to chains three and four. This affects a central element of the butchers' internal hierarchy - seniority. This was based on length of service. Those with longest service have highest seniority and man the first chains as of right. The financial value of this for the butchers with higher seniority was that chains were opened for each season starting with number one and two. At the end of the season the higher number chains were closed down first. This means that those with higher seniority were employed for eight to nine months per season while those on lower seniority might only work four to five months on chains three and four. As butchers were moved down, people already on those chains would be

pushed further down. This meant considerably lowered annual earnings for those people displaced from the new chains by new technology. The union termed this the "domino effect". There was considerable resistance to this from the butchers who refused to comply and stopped work until ordered back by a Court injunction. The company showed good faith by not pressing their advantage to the full. As a compromise, the company worked out a deal where those higher seniority butchers who lost work through being on a lower chain which closed earlier would be paid the award rate while off but they had to be on call. The award rate in most freezing works only accounts for around 50 per cent of the total wage, the balance being made up by a local plant agreement. This compromise was then found to be impractical because of the difficulty of administering it and because of the numbers involved. Instead another deal was made whereby a lump sum similar to redundancy was paid to displaced workers but they then had to go right to the bottom of the seniority on chains five and six which may only be open for six weeks of the year.

The union and affected staff were given definite notice that the technology would go in four months before installation started. In this case officials from the regional union as well as the plant officials were involved.

Regional officials were not impressed with the level of consultancy during the trial period.

> **"There was not nearly enough consultation at Plant 4 or at Plant 2. The company's way of consulting was to talk to us for a day - this was the consultation - then we'd negotiate for a day - mainly about manning. Then if they didn't get what they wanted they'd unilaterally try to enforce their way." (Regional Union Official)**

The "enforcement" by the company referred to here was the Court compliance route, to which the union had no answer. But the company was in no mood to

encourage what it saw as primarily obstructionist tactics for the purpose of slowing down the trial period and forcing more concessions from the company. They had been down this road before. In 1976 Plant 4 put in a new inverted chain system - this was the first in New Zetland - to trial it to see if this was a system that could be introduced across the board. They started to achieve fairly good tallies but the project was scrapped mainly because the union were threatened by potential loss of butchers and refused to co-operate. The chain was removed.

The company were determined that this was not going to happen again.

9.6.2 *Training*

Training for the new systems has already been described in sections above. Technical staff reported that they were not happy, either with the levels of training they received for the new systems or for their ongoing professional training. Like their peers at Plant 3, this contributed to their low morale and negative attitude towards the company. They felt that they were not able to keep up with technical developments in their fields which is an important consideration for staff working in a fast developing technical field. The GM said the plant was trying to cut costs and training was one of the areas that had come under scrutiny. He felt that if they wanted to acquire new skills they should bear this cost themselves "as they will very likely use any new skills to get a job somewhere else anyway".

Training for butchers was minimal. This was a great deal to do with the refusal by the union to co-operate with management in the trial period, which appeared to be part of the wider strategy of non co-operation from the butchers' delegate. In the event, butchers were trained on the job with two butchers per chain

designated as specialist trainers working on the chain with them. These trainers were butchers considered to have the experience and judged to have a "better attitude" who were given a crash course by the foremen. This arrangement appeared to work well, with the trainers creating a positive bridge between the butchers and the foremen and this may well have contributed to the relative success of the implementation compared to Plant 3. Chain Foremen received the standard training - a visit for several days to another plant already operating the technology - Plant 2 - and a chance to talk to their peers and see the new system in operation.

9.6.3 *Installation*

The actual installation of the new systems was supposed to be carried out by the engineers who manufactured the hardware, with technical staff working with them. Unfortunately, relations between the Chief Engineer and the engineers installing the systems quickly developed negative overtones. It is difficult to know exactly why this happened. The installation engineers had worked in many plants installing this technology with few problems of this type. The negative relations appeared to be the a consequence of the Chief Engineer's poor ability to relate to other people, coupled with increasing pressure from head office to finish the installation as soon as possible in time for the new season. As related above, at one point relations deteriorated to the point where the Chief Engineer ordered the engineer in charge of the installation off the plant, resulting on several days loss of progress. Because of these tensions, plant technical staff were not able to exploit this opportunity to learn about the new systems nearly as much as intended.

Many mistakes were made in terms of siting of ancillary equipment and spacing of stations on the chain requiring later correction and extensions had to be built to the raised platform on which the chains were situated to accommodate the requirements of the butchers.

Installation was eventually completed only a few days over the scheduled date but the new system, although working, was far from perfect for the reasons outlined in the section above. All plants had to adapt and change configurations as they trialed the chains and worked up to full speed and tally but Plant 4, like Plant 3, had many major technical problems, many of which could have been avoided or ameliorated if there had been better co-operation between plant engineers and installing engineers and production managers and butchers.

9.7 *Summary*

Plant 4 was the largest plant in the study and unlike Plant 3, relationships between the management and the butchers' union had been characterised by institutionalised conflict. Like Plants 2 and 3, the GM was a remote figure who understood little of the running of the MSH. The traditionally low levels of trust were exacerbated by two factors. First the supervisors at all levels in the MSH were demoralised by perceived arbitrary decisions of senior management which saw their numbers cut and a new Senior Supervisor installed who had no experience in the MSH. Secondly, the butchers' delegate present at the outset of the implementation phase of the new system was very clever and he did everything in his power to slow down the trial period in order to gain advantage for his people. He was able to fill the vacuum left by the annoyed supervisors and they were not willing to do anything other than work to rule. The frontline technical staff too were upset as they were subjected to perceived

arbitrary decisions concerning overtime and training. However the butchers on the new chains did receive adequate training and the atmosphere in the MSH was drastically changed by three events. First, the butchers' delegate was dismissed and a more moderate person was elected into the position. Second, a senior butcher from one of the chains was promoted to chain supervisor. He was not affected by the negative feelings of the other chain supervisors and set out to get his chain running better than all the others, using an unconventional motivatory strategy. These events did not change the negative atmosphere overnight but the worst aspects of the negative context were ameliorated.

The negative context at Plant 4 was the result of low mutual trust, poor training for the technical staff and for the MSH Supervisor, alienation and low feelings of ownership, particularly in the case of the Chain Supervisors and reliance on formal communication and problem solving.

Chapter 10: Comparison of the Plants

10.1 *Overview*

In this chapter I will compare the four plants and examine the way they differed in terms of both the objective variables - those that were beyond the power of individual plant actors to alter quickly - and the subjective variables - ones which were directly influenced by the organisational actors. I will propose a model to explain the differing outcomes that attempts to illustrate how the eight constructs (see Figs 10.1, 10.2) operate in a cyclical manner to create two different organisational contexts. These models will then be explicated at the plant level using actual plant data.
It is further proposed that it is these contexts - negative and positive - which are the most significant factors in influencing the success of the change initiatives in the plants and which are most similar to the organic form of structure (Burns & Stalker, 1961). Finally I shall compare the "standard" model of change with the model of change arising from a positive context.

10.2 *Objective Variables*

All four plants in the study were engaged in the same industry with similar kinds of people and unions representing the employees and all the plants were under the short or medium term threat of closure because of extensive industry restructuring. The plants in the study were driven towards new technology by the need to find more efficient ways of carrying out their core task of slaughtering sheep.

The most significant objective difference between the plants was their size. The two smaller plants had shorter payback times than the larger ones and it is reasonable to propose that this result reflects to some extent the large literature on the

positive correlation between size and negative social dynamics in organisations associated with bureaucracy (Blau, 1970; Mullins,1989; Pugh et al, 1969a and b; Scott, 1987). In general the literature seems agreed that negative social effects, such as conflict, will be higher as the number of people increases in an organisation. However the two smaller plants, Plants 1 & 2, had differing payback times which could not be explained by the size factor. The most significant explanatory variables for this difference were those social process variables pertaining to the manner in which the work of the organisation was effected.

Those informal, social process variables shaped the ongoing processes of the plants but also had a significant impact on the change process. *It is a major finding of this research that the ongoing, informal processes of an organisation influence the change process to a significant extent and that the change process actually begins before the organisation launches any change initiative. The success of the change process is significantly affected by the prior context of positive or negative informal processes.*

10.3 *The Positive Cycle*

The models of these two contexts attempt to capture the essentially dynamic and cyclical nature of the interrelationship between the construct variables. The first cycle (Fig 10.1) shows how the central element of mutual trust affects and is affected by the other three elements of *empowerment*, feelings of *ownership* and *integration.* As in any cyclical model containing feedback loops, the question arises as to where does the cycle begin? Trust is given a central position because of the great importance

of this element attributed to it in organisational change processes by both by the literature (Eg Holder, 1995; Raduchel, 1994; Wolff, 1995) and from field research.

It seems that it is the Senior Manager and then the less senior managers who must begin the cycle, and he or she does this by demonstrating that they can be trusted. There are several elements which contribute to this propensity to be trusted. First, employees must feel confident that the manager is able to carry out the task of managing sufficiently well that if the manager indicates that some outcome will eventuate from a proposed course of action, then indeed this will actually happen. For example, if the senior manager claims that adopting a new system of slaughtering sheep will greatly increase the chance that the plant as a whole will survive, then for the employees to trust this they must believe that the manager is capable of fulfilling his or her part of the equation..

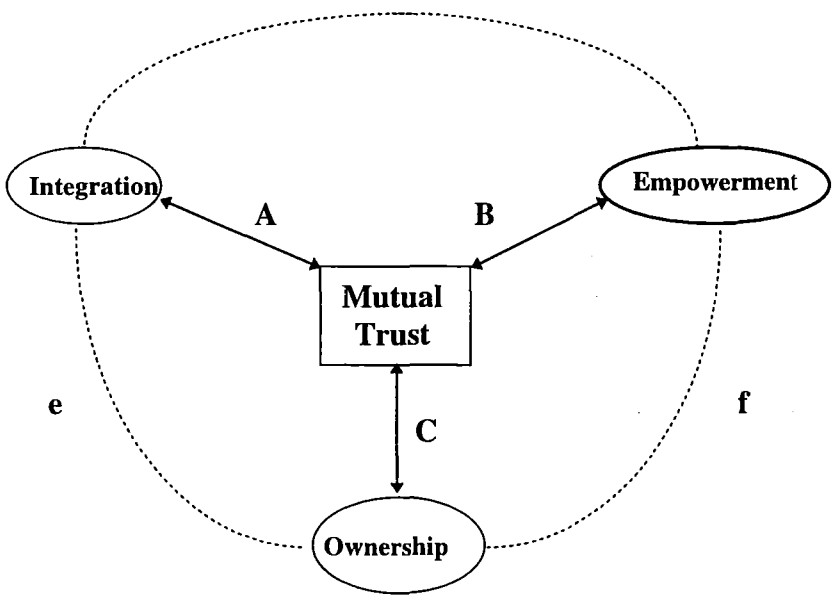


Figure 10.1 Positive Management Cycle

In short the employees must believe that the manager is able to accomplish the task.

The second element of trust is that the employees must believe that the GM is not only capable of carrying out his/her task and fulfil promises but that his/her word can be believed, that he/she is a person of integrity. Obviously, once a particular manager has established a track record of honesty and integrity then it is easier to believe that they will continue to act in this manner. The difficulty for employees, especially where they may have had previous managers who were not perceived to be people of high integrity, is that trusting the manager may involve them in some risk. To move outside the strict terms of any employment contract, for example to increase output in exchange for time off, may in the future expose them to demands to maintain this increased rate as the unrewarded norm. Similarly, to rely on informal, unwritten reports, instructions and concessions may result in recrimination if something goes wrong and they are unable to prove that these actions had the consent of the relevant manager.

The manager has at least two approaches to rely on to bridge this initial credibility gap. Firstly, the manager can behave in an open, consultative way and show that the experience, needs and wishes of employees are important. Secondly, the manager may demonstrate they can be trusted by starting to act on matters surfaced through consultation and open discussion in ways which include such suggestions in some form. Once some level of credibility is established, the probability of mutual trust becoming established grows. Lastly, the manager must

demonstrate that he/she cares about their subordinates and has their welfare, as well as the welfare of the organisation at heart.

The model indicates that trust is a dual mode factor in that it was mutual. The senior manager is responsible for establishing the possibility for trust to begin to grow but this process assumes that the manager has some degree of trust in subordinates to begin with. This implies in turn that the manager assumes a Theory Y type approach to management (McGregor, 1961) where positive attitudes and proclivities are attributed to subordinates. Once some degree of trust is established in the relationships through actions such as participation, any latent feelings of ownership in subordinates will be encouraged and fostered. This in turn will stimulate further trust. This relationship is depicted at C in figure 10.1.

Integration - or control through informal communication and problem solving - can only function in the presence of mutual trust as stated above. Feelings of ownership of the processes and the organisation add meaning and purpose to compliance with the informal systems. In turn the practice of using integrative processes further reinforces feelings of ownership and trust shown at e and A in the model.

As discussed in Chapter 3 , empowerment is at least as much a matter of the perceptions of the people being empowered as it is a concept of delegation (Conger and Kanungo, 1988). Viewed in this light, mutual trust is a key component of empowerment as are feelings of ownership and the use of informal, integrative processes and practice.

All these elements of the model reinforce and foster each other in a dynamic manner. As the positive management cycle practices continue, the efficacy of the

model increases, creating the positive context which forms the ground in which successful change management may occur.

10.4 The Negative Cycle.

The negative cycle operates to create a relatively negative context in a similar but opposite manner to the positive cycle (Fig 10.2). Here the mutual mistrust acts as a central dynamic upon which the cycle is based. Where a lack of trust in the manager's integrity and/or their competence exists, any attempts at consultation or participation as part of the change process is far less likely to achieve successful results. Empowerment is a risk for both parties. The manager risks having the workforce take advantage and to manipulate the situation for their own benefit while the workforce

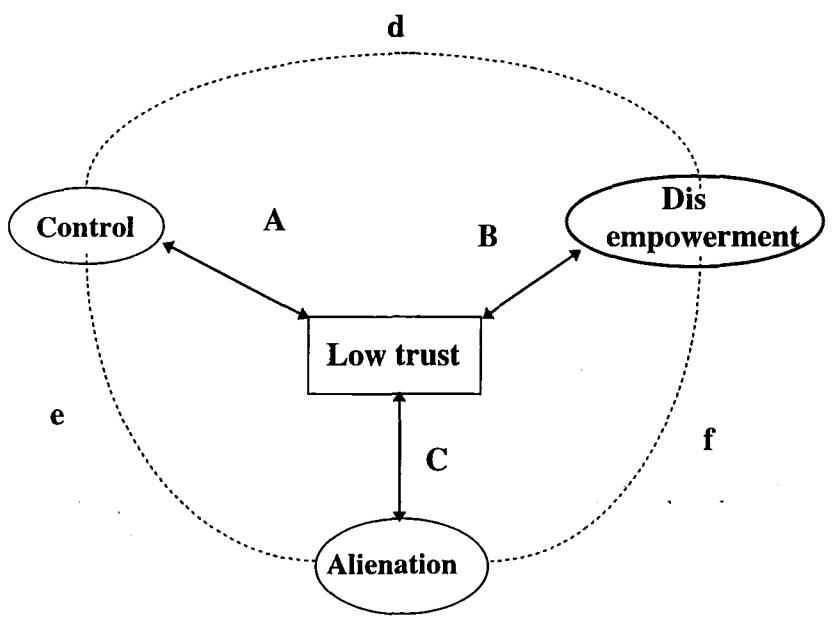


Fig 10.2 Negative Management Cycle

risks being exploited by the managers. In a situation where the workforce has evolved over time a cohesive and strong group to resist possible exploitation by managers, they risk losing this protection. There is also the question of perceived competence. The manager is unlikely to empower subordinates where they believe that the workforce is incapable of performing adequately. This pertains not only to front line workers but also to middle and frontline managers. If senior management perceive their lower level managers as having little ability they are likely to empower them through delegation. In turn as lower level managers perceive that they are not trusted, they will tend to be less prepared to exercise initiative and to "work to rule". This lowers feelings of ownership, people become distanced from what they are doing and alienated form the processes in which they are engaged. Integration is replaced by control where communications and problem solving are more formal. Where staff are "working to rule" they will depend on written, established instructions so they can protect themselves if results do not meet expectations.

Where trust is low, staff will tend to feel disempowered, alienated and controlled. Where this kind of negative cycle is established, these factors reinforce each other and become stronger. To initiate change where this kind of system operates is much more difficult and has less chance of success.

10.5 *Positive and Negative Cycles in The Plants*

In the case of Plant 1, The GM was from outside the industry, brought in to turn the plant around when it seemed that it could very well become bankrupt. He had not been inculcated into the prevailing dominant paradigm of the industry - one of conflict, tough approaches and an array of notions on how to manage and deal with

people. He was the kind of leader who had firm beliefs and values about his job and the personal characteristics to be able to put them into action.

The GM quickly established his competence when, shortly after his arrival at the plant, he conducted a thorough audit of management systems, mainly by asking people what they did, how they did it, what were the problems and how what did they need to be able to do their jobs. He was able to surface, in a relatively short time, all the major systemic problems and immediately set about amending them. He did this in a consultative, inclusive manner and employees saw problems that had dogged them for years being surfaced and then dealt with in ways to which they contributed in no small measure. Many of these things were simple, such as a failure to maintain accurate records of how many carcases came out of the freezing units each day, compared to how many sheep came into the plant and records of differential production costs. All the production staff knew this had been going on but felt helpless to do anything about it as the previous GM appeared to lack the skills necessary to install an adequate system and to ensure that middle and frontline management staff were able to maintain such a system.

Staff at the plant at all levels had known that the plant was not performing well after two incompetent managers in charge and they were enormously heartened by the arrival of a GM who both appeared to know what he was talking about and who was prepared to listen to their thoughts on the plant. It was this combination of a consultative, inclusive style and demonstrated ability that enabled the staff at all levels to feel confident that this GM had the capability to manage the plant and their efforts in a constructive way.

The second element of trust is that the employees must accept that the GM is not only capable of carrying out his task and his promises but that his word can be believed, that he is a person of integrity. The new GM was able to achieve this through his open style and through early on correcting some easily amended but highly problematic areas. The best example of this was in the record keeping. The new GM, taking the advice of key players at all levels in the production system, instituted a thorough yet simple system of tracking sheep right through the plant from arrival by truck to departure as a frozen carcase or chilled meat. This enabled staff to track input costs and to service suppliers and clients better.

In the process of uncovering problems at the plant, the GM invited staff to be as critical as they liked and established what amounted to an amnesty on malpractices, and stated that there would be no retribution from him on anything revealed. When some of the bolder staff took him at his word and entered into detailed dialogue with him, they found that not only was there no retribution but they were praised for their frankness. The word soon spread and the overall reaction of the staff was one of relief that their plant, widely felt to be largely out of control, was now under the firm guidance of a person who knew what they were doing and whose word could be believed.

But competence is not the last ingredient of trust. At the other smaller plant, Plant 2, the MSH Supervisor had a great deal more influence over the butchers in the MSH than did the GM. The MSH Supervisor was felt to be competent and it was believed that he meant what he said. However the low levels of trust at Plant 2 were engendered by the perception among the butchers that the Supervisor did not care about them, despised them and lost no opportunity to denigrate them. In addition to

this, the Supervisor had a low opinion of the butchers' capabilities. At Plant 1, the GM, as did the lower level management, had a great deal of confidence in the freezing workers in the MSH. These are the final two elements of trust. Mutual confidence in capabilities and the perception among employees that the Managers care about their welfare and respect them. In the case of Plant 1 this was extended to caring about the future of the plant itself. Before extending the model to the other factors, I will briefly examine the trust construct at the other two plants.

At Plant 3, there had been a culture and history of relatively low overt conflict. But rather than the kind of positive atmosphere as pertained at Plant 1, this had more the characteristics of an armed truce. The Production Manager was autocratic in style and had a generally low opinion of the capabilities of both the supervisors in the MSH and the freezing workers in there. The company tried to break this negative cycle by introducing the "new era" of team work, participation and cooperation as part of the introduction of the new system. At first suspicious, the freezing workers determined that the new GM and the company really wanted to do this and decided to cooperate. This suited many of the plant workers as they knew that if they were allowed to have real input into the way the work was done, they could improve the systems a great deal. A core of butchers were keen to contribute their ideas and felt frustrated at not being able to. The promises of participation and so on made them willing to go along with management in the implementation of the new system. As events transpired, the Production Manager had not believed that this new approach was workable at all and over the months of the new system trial he demonstrated that nothing had changed in the way the MSH was to be run. Not only were freezing workers not asked for input, one group was punished severely for

insisting on implementing a rotation scheme of their own devising which they felt worked much better.

As a result of this the attitudes of the freezing workers, which had improved from one of, at best, wary respect, to growing enthusiasm, changed dramatically for the worst. Now the attitudes were worse than they had been before. They had risked trusting the Production Manager and now they felt betrayed and hurt. They knew they were not trusted or respected and they also knew that the MSH supervisors were not trusted.

Plant 3 was one of the larger plants but was situated in a relatively small town and was the biggest employer in the area. As at Plant 1, many of the employees had known each other for many years and there was a level of ownership of the plant. It is likely that this is what kept the levels of overt conflict low. However, after the failure of the new participative management system, feelings of alienation greatly increased and it was at this plant that some of the bitterest statements revealing alienation were made. Supervisors, too were allowed little discretion and as a result they tended to "work to rule", responding only to written instructions, seeing that they were valued only as enforcers of the Production Manager's orders. The informal system tended to work against the smooth implementation of the new systems, instead of becoming an integrated part of the whole as at Plant 1. There was little sign of the kind of informal practices which ensured that the new system implementation progressed quickly at Plant 1. The engineering staff were also in a similar situation in that the fitters, who had most day to day effect on the technology felt alienated and bitter. This again was the result of an autocratic Chief Engineer who they felt looked down on them and had little respect for their skills.

The negative cycle at Plant 3 saw feelings of mistrust growing along with alienation and feelings of disempowerment. The result of this was that the Production Manager increased "management by control". This brought about further deterioration in relationships and the factors making up the negative cycle.

The conflict at Plant 4 was more institutionalised than at Plant 3, with full time union officers and a history of confrontation stretching back for many decades. Feelings of mistrust were high and these extended throughout the chain of command and among the engineering staff. The new MSH Supervisor put in to oversee the implementation of the new technology, was manifestly inadequate to carry out the task, with no experience in the MSH. This situation was exacerbated by the Senior Supervisor's direct assistant who felt aggrieved at being passed over for promotion, as well as the chain supervisors who also felt aggrieved at the arbitrary way that their numbers had been "downsized" recently. This situation was cleverly exploited by the butchers' delegate who waged a war of attrition by seizing tactical opportunities to slow down the implementation. Management responses to these problems were through formal communication and problem solving and trying to exert more control. As a result, both supervisors and butchers felt alienated and tended to meet problems with the expected formal responses.

Several factors came together to help move Plant 4 into a more positive cycle which greatly assisted in ensuring that the payback time was not a lot worse than it was. Firstly, many of the supervisors had formerly enjoyed more discretion and had been expected to use this to run their chains. The fact that they were more or less "working to rule" was a recent phenomenon stemming from the actions of the GM in restructuring with no consultation with the people involved. Secondly, the

troublesome butchers' delegate was fired. The new delegate was much more reasonable and prepared to compromise while at the same time, the butchers' expectations of their delegate had been realigned by the tougher stance of the GM in firing the delegate and then suspending one hundred butchers for protesting by refusing to work. The third factor which improved the situation was the new Chain 2 Supervisor, promoted from the ranks, unaffected by the situation causing the poor morale of his fellow supervisors and ready to try new methods. He was viewed with some suspicion by both sides at first but mainly by energy and enthusiasm and the use of unorthodox motivational techniques, he succeeded in ameliorating the worst effects of the negative cycle through increasing the trust his subordinates had in him. However, the cycle remained, in relative terms, a negative cycle.

It is interesting to note here that at the end of my last visit to Plant 4, the GM told me that they were planning to implement a TQM system, using a highly priced consultant to do so. I told them that in my opinion this would have little chance of success because of the low levels of trust that existed between themselves and the butchers on the chain. I was asked how they could change this and I replied that they had to demonstrate they could be trusted by doing something trustworthy. This was obviously a novel approach to the management team who felt that there could be a big risk for them involved.

I went back for a brief visit of a few hours with the GM and the union officials a eighteen months after the end of my data gathering to tidy up some factual data and I found that a much more positive air pervaded the plant. On my last visit there the union was very worried about the next round of wage negotiations as they knew that new legislation allowed greater freedom to employers to impose their will on

employees. For their part, senior management were looking forward to having the power to extract major concessions from employees. However the Industrial Officer and her negotiating team had decided not to take advantage of this new power. Instead they sat down with the union advocates and took a problem solving approach rather than a combative one. The new contracts they arrived at were only marginally different from the old ones. Management confined itself to "tidying up" a lot of peripheral practices which had been in the old contracts. The union had been more than glad to do this and subsequently to co-operate in the new TQM initiative. Plant 4 was along way from assuming the qualities of the positive cycle at Plant 1 but there was a major shift in this direction, as expressed in the attitudes of both management and union. Both parties confirmed that the origin of this was senior management demonstrating a novel propensity to be trusted. The language used by each party in talking about the intentions and perceptions about the other was now very different from the language I had come to see as the norm for this plant during my data collecting visits.

10.6 *Summary*

I have described how the two cycles operate in a dynamic and reinforcing manner in the four plants. Mutual trust or lack of trust in each model as is the most significant factor in that it energises and reinforces the other three factors while they in their turn reinforce each other as well as the central factor of trust or mistrust. The longer the cycles continue, the stronger each becomes. One would expect that such a cycle, especially if one that had evolved over many years, would become less and less susceptible to change. However, drawing on the experience of the radical change

at Plant 4 it may well be that in fact the direction and /or velocity of such cycles may be reversed or altered through actions which bring about changed perceptions in relation to mutual trust. This aspect was not the subject of this study and this data was gained only through very brief conversations with a few key people but nevertheless it does point to possibilities for further research to examine the centrality of trust in the cycles.

10.7 *The Standard Change Management Model*

The most prevalent model of change management offered in the literature is depicted in Fig 10.3. I shall use the model proposed by Nadler (1981) as an exemplar of the various models as this is one of the few which makes specific reference to the informal processes of the organisation , but only during the transformation process. Nadler (1981) proposes this process as moving from State A through a transformation process to State B. The most commonly cited problem with or barrier to change is that of the anxiety, and resistance which derives from this, engendered by change.

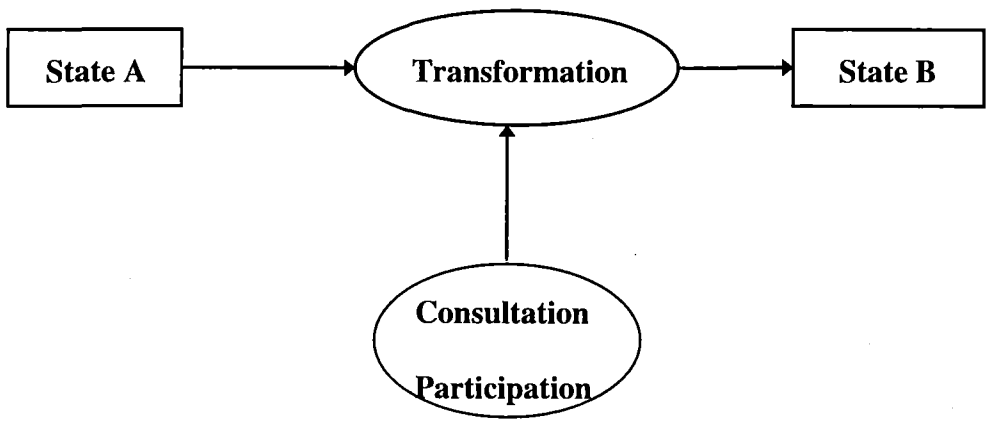


Figure 10.3 Standard Change Management Model

The common solution to this is to consultation and participation with regard to the details of the proposed change.

As we have seen, all the plants in the study followed this standard "recipe" for successful change management by consulting staff prior to the introduction of new technology yet there were very different outcomes in terms of the success of the change management process which is not explained by the "standard" models.

It is proposed here that the differential outcomes of the change processes observed in the four plants is best explained by a model which takes account of the ongoing processes or contexts pertaining in the plants as depicted in Figures 10.1 and 10.2 above.

This new model is depicted in Fig 10.4. This suggests that the successful change process takes place within an ongoing process of transformation which is a characteristic of the positive management cycle.

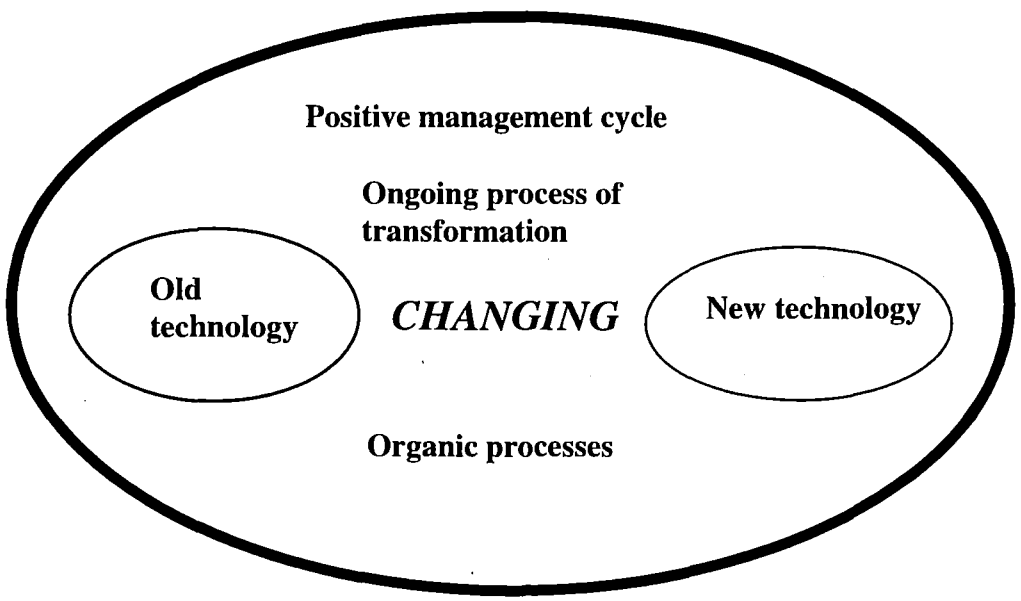


Figure 10.4 Change Model

The most significant difference between this model and the "standard" model is that the starting point of change is founded within the ongoing context of the organisation, not at some arbitrary point decided by the change agents and is concerned with the process of ***changing*** as opposed to the process of ***change***.

In a negative context, this ongoing process is antithetical to change as it is energised by mistrust, alienation, management by control and disempowerment. It is these phenomena which give rise to the major concern of change practitioners - resistance to change. If the members of an organisation feel little trust for their managers, then it is easy to see why they would be resistant to change initiatives proposed by those managers. Implementation requires a process of continual experimentation and close cooperation between staff in different functions and at different levels. This is difficult to achieve where there is low trust, disempowerment, and control through formal communication and problem solving. The implementation phase is the very essence of changing and requires close cooperation through informal communication and problem solving and the discretion to deal with problems and experiment at the point in time and place where they occur.

At Plant 1 this process was seen at work continuously. A strong sense of ownership encouraged both technical and production staff to work together to find better ways of doing things. Not only was this allowed, it was rewarded with verbal praise and, at times, when a particularly difficult problem was solved, a "shout" was provided, where the GM would lay on drinks for the staff. Feelings of ownership and perceptions of trust were constantly being reinforced and the cycle made stronger. The GM practiced open communications where union delegates were invited to attend

management meetings and he was invited to union meetings regularly at the plant. . This enabled both parties to ensure that there was clear understanding on potentially contentious issues. Communication was also informal, with all staff encouraged to talk to whoever they needed to. This was able to work well because staff trusted each other and the GM. They perceived that they would not be blamed if something went wrong and there was no paper trail of orders to cover themselves. Informal communication that people trusted combined with encouragement to deal with problems themselves enabled informal problem solving and empowerment.

At all the other plants, evidence of the negative cycle was observed frequently. At Plant 2, where butchers were held in contempt by their supervisor, butchers tended not to react proactively when the machinery or task for which they were responsible began to malfunction. Not until the malfunction became so serious that the chain had to stop would they react, but this reaction took the form of standing back while the MSH Supervisor and his assistant would rush in, shouting and cursing. They would commonly eschew any knowledge of why this had happened or what could be done about it. A fitter would be brought in who would work at the problem while the butchers would all disappear outside to play cricket or to smoke. They felt no ownership of the problem or of the whole process and felt no real responsibility for what happened there. This would reinforce the MSH Supervisor's perception of the butchers as stupid, lazy and not worthy of trust. Because he had no respect for them, he tended to treat them formally and insist on problems being solved formally. This would then encourage feelings of lower trust, lower feelings of ownership and so on.

At plant 3, the Production Manager had little respect or trust for either the supervisors on the chains or the butchers there. He therefor allowed very little

discretion and attempts by either supervisors or butchers to sue initiative were met with punishment, sometimes severe. This engendered low levels of ownership and raised feelings of alienation. Staff tended to "work to rule" and would not do anything unless there were direct orders. The technical fitters and engineers responsible for the technical side of the installation suffered from the overbearing manner of their Chief Engineer. They were blamed for the slowness of the implementation by their managers while both the engineering staff and the production staff blamed each other.

This cycle of mutual mistrust and blaming engendered a demand for formal communication and problem solving. Where there was little trust and people were likely to be blamed if anything went wrong, it was perceived to be important to be able to demonstrate a "paper trail" as a protection against being blamed for problems. The whole atmosphere at Plant 3 was one of weariness, of people who had given up trying to gain any kind of intrinsic reward from their work. In this atmosphere of suspicion. alienation, blaming and ennui, it is little wonder that the implementation took so long.

Conflict and mistrust at Plant 4, the biggest plant, had always been relatively high but this was exacerbated by the restructuring among the supervisory staff in the MSH prior to the installation of the new systems. The number of supervisors was cut and a the MHS Supervisor was replaced by a young person with no experience of the MSH. This was seen as both stupid and insulting by the supervisory staff. However, the supervisors had experienced a positive relationship with the former MSH Supervisor and were accustomed to working less formally and with more discretion than their counterparts at Plant 3. The implementation was slowed down by the butchers' delegate who not only continued the conflictual strategies endemic in the

plant but also cleverly exploited the power vacuum in the MSH for his own ends. The supervisors did not trust or have confidence in senior management, nor did they trust the delegate. Supervisors felt little sense of ownership and problem solving and communications were formal. Problems were dealt with through official channels and fitters and technicians worked with little help from the butchers working on the chains. As at Plant 3, there was evidence of suggestions being made by senior butchers which were dismissed by the technical staff. The GM was a remote figure who knew little about what was going on in the MSH. All communications with the butchers were effected through institutional channels by way of the Industrial Relations Officer and the delegate and full time union officials. Plant 4 did not have the advantage of all the other plants in being closely associated with a small local community and this fact, as well as the low trust and high conflict meant there were low levels of ownership experienced by both supervisory staff and butchers.

But several factors combined to bring about a positive change in the MSH at Plant 4 which combined to improve the atmosphere in the MSH. First the butchers' delegate was sacked. This was a traumatic experience for many butchers but this was done on the last day before a three week Christmas break and so initial outrage was dampened by time. The butchers elected a new delegate who was far less combative and more prepared to compromise and discuss matters with management. The other major change was the promotion of a senior butcher to chain supervisor on one of the chains with the new system being implemented. Not only was he a highly experienced and energetic butcher, he was not affected by the feelings of resentment evidenced by the other supervisors. The butchers under his supervision knew him well and trusted him and he was able to transform the feelings among the butchers

manning his chain. This new supervisor was a very colourful character and one of the most memorable things he did was to offer a keg of beer to his butchers if they managed to get their chain up to full speed before the other chain. His new fellow supervisors tried to force him to conform with their norms and values but his enthusiasm and refusal to be deterred saw him able to side step their attempts. In the end the supervisor on the other chain had to follow his example, under urging from his own butchers who did not want to be beaten by their peers on chain 2. Although levels of trust remained relatively low, the negative spiral was interrupted and made more positive.

10.8 Summary

The "standard" change model is deficient in one major way. It takes no account of the existing context in which the change initiative is embedded. It is the contention of this study that this prior context is a significant variable in terms of the probability of successful change. There is an assumption in the standard models that the change process has a clear beginning point which is the first stage of the change management process. The evidence from this study suggests that in fact it is the existing context which is the beginning of the change process. If this context is positive, described as a dynamic, ongoing process of *changing* then the process of implementing technological change is more likely to be successful or is likely to produce better outcomes than a change process embedded in a negative context. Further, the level of mutual trust is a key factor in energising this prior context.

Chapter 11: Conclusion

11.1 *Overview*

In conclusion I will summarise the main arguments of this dissertation and look at some questions raised by this research which may fruitfully form the subject of future research.

11.2 *Summary of Main Arguments.*

When I began this research seven years ago, I had a clear notion of what I was looking for and what I would find. These notions were based on what I had learnt about the management of change in studying organisation theory, organisation behaviour and organisation development. After my first round of plant visits and subsequent analysis of the data and discussion with my supervisor and colleagues, an entirely different "story" appeared to be emerging. The structural theories and models with which I was familiar did not explain what the data appeared to be revealing. Rather what was emerging, and was confirmed by subsequent visits, was a processual model, not only of change but also of continuity; and that these two phenomena were not discrete but were embedded in and grew out of each other. These processual dynamics I termed "contexts" and found that the degree of mutual trust was a central variable in determining the nature of this context. In turn, a significant contributor to the degree and quality of trust in the contexts was the integrity and quality of the senior manager(s). Seven years ago I could find little in the literature on which I could build to develop this processual, trust based, contextual view of the management of change. This was not a happy situation for a student attempting to write a Ph.D. dissertation to find himself in. However I was encouraged to persevere

and I attempted to synthesise the different aspects of a wider literature, including, for example, the literature on innovation. In the last few months of writing this up, almost at completion, I find an emerging literature on the processual, contextual approach to the management of change (Hurst, 1994; Dawson, 1996). In particular these authors write of the central importance of trust as a central, energising factor in this processual, contextual model.

The qualitative, longitudinal approach taken in this dissertation is seen as essential to examine such processual, contextual elements. As Dawson puts it "In contrast to the dominant approach in organisation theory which emphasises the importance of sophisticated quantitative analyses (Ledford et al, 1990: 6-8), the focus of contextualists is on longitudinal qualitative data." (Dawson, 1996, 63).

The phenomenon of organisational change has been a central concern of organisation theory at the macro level (Eg. Contingency Theories, Burns & Stalker, 1961; Lawrence and Lorsch, 1967; Institutional Theories, Dimaggio & Powell, 1983; Resource Dependency Theory, Pfeffer & Salancik, 1978; Population Ecology, Aldrich, 1979; Hannan & freeman, 1977), the meso level of change models (Eg.Congruence Theory, Nadler, 1981), and the micro-level concerned more with practitioner oriented prescriptions for change management (Eg Beer et al, 1990; Jick, 1993). At the same time there is an emerging concern at the many change management failures of all kinds (Eg TQM. Fuchsberg, 1991a and 1991b; Kearney, 1989). The main body of change management literature portrays change as a sequential event occurring as a finite episode in the otherwise stable life of an organisation and it is this portrayal which is coming increasingly into question (Kanter, 1992: Duck, 1993). Related to this concern is the notion of the need to study

the process of the process of *changing* rather than the process of change (Srivastva et al, 1992; Johnson, 1987).

In the literature review I made the assertion that for a theory of change to be useful to practitioners it should have the quality of being operationalisable at the third level - that of change practice. A major shortcoming of the three levels of organisational change research is that there is almost no attempt to arrive at an integration between a first stage, macro level theory with secondary models of change through to third level practices. The findings of this research make it possible to point to an integration between these three levels, based on elements of contingency theory. To do this it is necessary to draw on the innovation literature (Spender & Kessler, 1995) where there is an emerging recognition that the change process requires an organic form along the lines described by Burns and Stalker (1961) and Lawrence and Lorsch (1967). However these writers extend their thesis by developing prescriptions for managing the interface between the organic and less organic components of an organisation which are very similar to those developed by writers in the field of organisation theory and do not address the dynamic, processual elements inherent in such a relationship.

If we accept that innovation is a form of change and that the change process requires an organic mode, as asserted by Spender & Kessler (1995), then we are able to say that the change process requires an organic mode, as first described by Burns & Stalker (1961) and Lawrence and Lorsch (1967). It is the argument of this dissertation that the most successful change process was observed at Plant 1 and that this was because of the organic mode, - described as the positive context - which pertained at

that plant. This establishes a clear link between primary level theory, second level model and third level practice.

Classical contingency theory as espoused by Burns and Stalker (1961) and developed by Lawrence and Lorsch (1967) maintains that a stable environment calls for a mechanistic structure while a dynamic environment requires an organic one. When an organisation, or some part of an organisation, is undergoing change, the environment, by definition, becomes more dynamic and turbulent and therefore, according to contingency theory, an organic mode of operating is called for. Spender and Kessler (1995) applied this rationale to the area of innovation management but if we accept that innovation is, amongst other things, a type of change, then it is legitimate to extend its application to change management in general. In summary, the proposition here is that primary level contingency theory, in its discussion of organic and mechanistic structures may be linked to models of change management as outlined in Chapter 2 and to practice, as observed and described in the plants.

However the description of the positive context goes beyond describing the standard four elements of organisation structure - division of work, delegation, departmentalisation and span of control. The four elements of the positive context are, *mutual trust, delegation, feelings of ownership* and *integration.* Integration and delegation are consistent with standard structure models but the concepts of mutual trust and feelings of ownership are not. The four plants had similar formal structures, consistent with their differing sizes and a comparison of them on the standard four elements does not capture the very real differences between the plants. The domain of comparability which both differentiated the plants' structures and explained the

different outcomes lay more in the area of the social dynamics of the organisations - the enacted structure.

It is the enacted structure which I have termed the prior context. This prior context comprises the foundation "building block of change" (Kanter, 1992) and it is this context which has a significant effect on the success of the change management initiative. It is proposed here that there are two kinds of prior context: the first is termed a positive context, characterised by mutual trust, informal communication and problem solving, empowerment and perceptions of ownership among organisational citizens. The second is termed a negative context characterised by low mutual trust, formal communication and problem solving, formal control and perceptions of alienation. Of these factors, mutual trust, or the lack of it, is proposed as a central, driving and energising factor.

In this domain mutual trust appeared to be the most significant and key element. According to Mayer et al (1995) the topic of trust is now becoming of more interest to organisational scholars and Gambetta (1988) noted that many scholars view trust as a "fundamental ingredient or lubricant" of social interaction in organisations but do not explore this any length and rather "move on to deal with less intractable matters". Mutual trust - or the lack of it - appeared to be the key driver and energiser of the positive and negative contexts in the plants and this in turn appeared to be the factor which was most closely related to the success of he change initiatives. Mayer et al (1995) proposed a model of trust which goes beyond previous models which were essentially static. Mayer et al (1995) include a feedback loop which signifies the longer term effects of the levels of trust (Fig. 2.2). Simply stated, Mayer et al (1995) propose that if there is an initial low level of trust then this will tend to be reinforced

through a downward spiral. On the other hand, an initial higher level of trust will reinforce an upward spiral. The data from the plants concurred with this depiction of the dynamic nature of the trust relationship and indicated that there is a feedback loop which acts to increase or decrease both the trustor's propensity to trust and the perceived factors of trustworthiness. If the managers acted in a way which promoted trust in their subordinates then this acted to increase the subordinates' propensity to trust and increased their perceptions of benevolence and so on in their managers. If the managers also demonstrated the ability to carry out their responsibilities in a competent manner and showed they could be believed, then trust was further promoted. In their turn, if the subordinates demonstrated that they could be trusted not to abuse or exploit the trust in them and performed their tasks competently, this acted to increase the trust towards them experienced by the managers. Lastly, the "factors of perceived trustworthiness", ability, benevolence, and integrity in Mayer et al's model are close to the critical perception constructs that employees in the four plants had for their supervisors and managers.

Integration through informal communication and problem solving, empowerment and feelings of ownership are all energised and made potent through mutual trust and in turn contribute to increased trust. The main barrier to trusting relationships appears to be the fear that trust will be abused. To trust another party means to expose yourself - it's a risky strategy. It is far safer to assume the worst and act on this assumption - the kind of situation observed at Plants 2, 3 and 4 in varying degrees. If either party doubts the abilities of the other then empowerment is meaningless. Similarly, if one cannot trust the word of the other or does not believe

they are acting in their best interests then integration and feelings of ownership become very difficult.

We alluded above to the utility of the organic form in the management of change. The data from this research indicates that these elements of the prior context in fact make up an organic structure.

A major finding of this dissertation is that the management of change in organisations is a "messy", ongoing and dynamic process rather than sequential and episodic as it is portrayed in much of the literature (Eg Beer, 1976; Mohrman & Cimmings, 1989). The management of this kind of situation requires an organic structure. If we accept that an organic structure and process is required for the management of change and that an organic structure, as defined here is fundamentally dependent on mutual trust and that mutual trust does not occur overnight, then it is possible to state that the first step in change is to establish an ongoing organic structure. This is why it is proposed here that the first stage of change begins before change begins. Change is rooted in continuity and the process of changing develops from the process of continuing.

All four plants adopted the standard industry practise for the change management process - negotiation, participation and consultation with varying levels of training for participants. This practise is based on the "standard" prescription for change management which has a primary concern combating resistance to change yet there were quite different outcomes for the four plants. It is proposed here that the difference was primarily the effect of the prior contexts in which the different change management initiatives were embedded. The changes observed were not sequential and orderly, as assumed by the "standard" prescriptions for change management, but

tended rather to be iterative and "messy". An organic structure, as described above, is necessary to best cope with this situation and this structure was in place before the change initiative was begun.

It is not the intention of this dissertation to propose or suggest yet another prescription for change management. Rather it is the intention to establish some basic principles concerning the "prehistory of change" (Kanter, 1992). The actual structural configuration of any change management initiative may well follow a "standard" prescription, for surely there must be consultation and participation and the effects on other sub-systems must be taken into account and so on, but the quality of the outcomes from any given prescription appear to be dependent on the quality and nature of the organisational context and the ongoing processes of continuity.

The suggestion here is that it is the human qualities - integrity and so on - possessed by management, rather than technical ones which fundamentally underpin and characterise the quality and nature of the prior context. The thesis asserts that largely intangible elements such as trust, integrity, sense of ownership and quality of informal processes are more important than tangible elements such as strategy, structure and action plans in determining the outcomes of organisational change.

It may appear from the emphasis on management qualities in the conclusions of this study that it thus joins the ranks of many "managerialist" treatises which assume that it is solely the actions of managers which "cause" either beneficial or disadvantageous outcomes in organisations. One could be forgiven for assuming after reading much of this managerialist literature that non-senior-manager members of an organisation had virtually no role to play apart from merely following the orders of their superiors. However I would like to stress here that *all* the staff in the plants here

had a significant role to play in the overall functioning of the killing chains and their success or otherwise. That the managers' roles are emphasised here is a natural concomitant outcome of the fact that there *is* a leading management role in any organisation.

As the description suggests, the cycles depicted here are not unidirectional, top to bottom, they are cyclical, and strongly affected by feedback loops which are an integral part of the process. Ensuing actions by the senior managers will be stroingly affected by the behaviours of other organisational members. Thus although managers may have a leading role in initiating the process, *all* the organisational actors have significant roles to play in building, nurturing and maintaining a positive (or negative) context.

This thesis is supported to some degree by previous research on the management of conflict in the meat industry in New Zealand. The New Zealand meat industry has in the past been characterised by high levels of conflict and in general, this has engendered a culture of conflict and confrontation. Previous research has pointed to large differences between plants in the degree of overt conflict exhibited and this has been attributed to the quality of senior manager (Howells & Alexander, 1968; Inkson, 1979 a& b; Ryman, 1979). This research suggests that plants exhibiting lower levels of conflict are managed by people demonstrating the kinds of qualities that, in terms of this dissertation, would engender mutual trust.

It may well be that the high number of failures in various change initiatives does not demonstrate the need for yet another, improved prescription but for an improvement in the manner in which the ongoing processes of continuity in an organisation are managed. In the first instance this is the responsibility of senior

management. Plant 1, the most successful plant, was characterised by senior managers who demonstrated the qualities and actions necessary to initiate a positive, organic, ongoing context. This is not high level management theory. What I am referring to here, given that managers possess the requisite technical management skills, are the basic qualities of integrity, acting on positive assumptions about subordinates, acting on their behalf first and both supporting and delegating where appropriate. The findings of this thesis suggest that values-based management is a prerequisite to bringing about change effectively in organisations. The values that underlie successful change efforts are integrity, respect for people, tolerance and patience. Effective change management seems to require an appropriate blend of:

- Right knowledge (competence and capability)
- Right skills (Interpersonal and process-oriented)
- Right values (Integrity, respect, tolerance, patience)

The best performing plant in this study illustrates this idea rather well. Plant 1 achieved a high trust context, relatively empowered work force with attitudes and values firmly aligned with those of the plant and its survival without input from any consultants or deliberate attempts by management to espouse "modern" participative practices. The General Manager did have a philosophy and practice of open communications and demonstrated integrity and honesty in his dealings with employees. Input from employees was encouraged and the "makeup agreement" which proved critically important to the eventual success of the plant was a concept that originated from the butchers themselves. The fact that the regional meat workers union secretary was vehemently opposed to such an agreement is an indication of the high risk involved for the employees. That employees chose to ignore this view and

continue to push for the implementation of the agreement is a tribute to the quality of the relationship that existed between all employees at the plant and their trust in the integrity of the General Manager. This agreement built on the existing positive context and served to strengthen the positive elements by providing an inclusive framework which allowed all the different and potentially conflicting alliances to work together for their mutual benefit.

11.3 *Future Research*

The conclusions of this research emerged from the data in an ongoing, continuous manner. I did not go into these plants expecting to reach these conclusions. I set out to examine the process of change by looking at what prescription was used - as preliminary visits showed that there were prescriptions - and to find how well they worked and how they compared to the practices and models in the literature. The results suggest that it is the prior context which is the most significant variable predicting the quality of the outcomes. Future research could be carried out specifically measuring the significant variables and their interactions and their relationship to outcome quality. More specific instruments could be developed to collect and examine these variables more systematically.

The central role of mutual trust is another important finding of this dissertation. The extension of Mayer et al's (1995) model should be examined and tested empirically in a more rigorous manner. The proposition made above that levels of mutual trust or mistrust are reinforced through the other three elements of the two contexts should be examined further to confirm the relationship and further explicate it.

Plant 1 displayed the morphology of a formal, mechanistic organisation, reflected in the formal structure which it possessed in common with the other plants, but the significant characteristics which formed the distinctive mode of operation there were close to those which Burns & Stalker (1961) would describe as being organic in nature. Burns & Stalker (1961, 122) assert that "while organic systems are not hierarchic in the same sense as mechanistic, they remain stratified." In an organic system this stratification arises from "whoever shows himself most informed and capable, ie. the 'best authority". The location of authority is settled by consensus." A characteristic of staff at Plant 1 was the commitment they felt to each other and to the plant. Burns & Stalker (1961, 123) maintain that this kind of commitment is a function of the organic form "the area of commitment to the concern - the extent to which the individual yields himself as a resource to be used by the working organisation - is far more extensive in organic than mechanistic systems.". Burns & Stalker (1961) were at pains to emphasises that their two types of structure were not a dichotomy but rather a polarity and that many intermediate forms could be found. There were also organisations which contained both forms in different departments (a point extended by Lawrence and Lorsch (1967)) but also that "the relation of one form to the other is elastic, so that a concern oscillating between relative stability and relative change may also oscillate between the two forms." Burns & Stalker (1961, 123). The major difference with these accounts and what was observed at Plant 1 was that *both forms existed simultaneously, but in different spheres.* By this is meant that the formal, mechanistic structure was in place but that the manner in which this was operationalised was through informal social dynamics and mechanisms. This suggests first that the exact definitions of and differences between the informal and formal

systems needs to be explicated and second that the relationship between the organic and informal system be examined and defined more rigorously than it is in the literature at this time.

When data was collected from the relevant departments at each plant, I was able to take a brief look at other departments within the organisations. Data arising from such "sideways" examination is used only where there was some relevance but for the most part does not form part of the data from which these results are derived. However there were indications that the nature of the context pertaining in the MSH department may have contained differences in some respects from those in other departments at the same plant. Finne (1991) develops the notion of "local theories" and meta theories" to capture the idea that different departments in an organisation may have differing contexts. Finne defines these local theories as 'frameworks which give events and perceptions a meaningful interpretation for their holders' (p 1067). One of the conclusions of this dissertation is that senior management play an important role in setting the tone and nature of the contexts in which the organisational actors play out their roles. The story of Plant 2 below shows that the MSH Supervisor's style had a significant impact on the nature and quality of the context there. If indeed there are differences between departments in the nature of contexts in the same organisation and if we extend the proposition of the pivotal role of the senior manager then we need to examine the nature of the mediating role of middle managers in more detail by comparing departments within the same organisations.

11.4 *Last Word*

This research is intended as a contribution to theories of change and changing and it is not intended to be a basis for developing further prescriptions for the management of change. Rather it is a plea for organisational citizens to consider the quality and nature of the ongoing social dynamics of their organisations. Analysis of the data from this research suggests that the management of change is not a discrete set of actions distinct from the "normal" activities of the organisation and best managed using a prescripted set of actions. The nature of the management of change is a "messy", dynamic and iterative process involving much trial and error. This process demands an "organic" approach which, by its very nature is characterised by informal relationships, feelings of ownership and delegation which in turn require mutual trust between the principal actors involved. This context must be in -place before the actual change is initiated. The primary responsibility for the fostering and maintenance of such a context lies within the domain of senior management. The qualities required of managers are those virtuous attributes of technical competence, integrity and commitment to those who are being managed as well as the operation they are together engaged in.

APPENDIX 1

Plant 1	YEAR 1		YEAR 2		YEAR 3	
	MAN	AUTO	MAN	AUTO	MAN	AUTO
CCS/MIN	6	8.1	6	8.1	6	8.1
MIN/DAY	432	432	432	432	432	432
DAYS IN SEASON	130	130	184	184	184	184
DAILY KILL	2375	3245	2375	3450	2375	3450
ANNUAL KILL	308750	421850	437000	634800	437000	634800
BUTCHERS NUM	49	40	49	40	49	40
LABOURERS NUM	42	34	42	36	42	36
BUTCH DAILY PAY	149	158	149	158	149	158
LABR DAILY PAY	94	98	94	98	94	98
LABOUR COSTS (($/ccs)#	4.74	2.97	4.74	2.85	4.74	2.85
MACHINE COSTS ($/ccs)	0.07	1.41	0.05	0.12	0.05	-1.06
TOTAL COST ($/ccs)	4.80	4.38	4.78	2.97	4.78	1.79
CCS/BUTCH/DAY	53	87	53	87	53	87
REL COST SAVE/CCS		0.42		1.81		2.99
REL COST SAVE/YR		176514		1149054		1897374
PROFIT/CC ##	5	5.42	5	6.81	5	7.99
TOT PROF/YR	1543750	2285764	2185000	4323054	2185000	5071374
TOT INCR PROF/YR		742014		2138054		2886374
CAP INVESTMENT ###	59000	1700000	59000	957986	59000	215973
BAL CARRIED FWD		957986		215973		-1922082
ANN. COST INVESTMENT *	20650	595000	20650	75590	20650	-672729
PAYBACK TIME (YRS)		**2.29**		**0.45**		**0.07**

1.5 YEARS

Plant 2	YEAR 1		YEAR 2		YEAR 3		YEAR 4	
	MAN	AUTO	MAN	AUTO	MAN	AUTO	MAN	AUTO
CCS/MIN	8	9.54	8	9.54	8	9.54	8	9.54
MIN/DAY	440	440	440	440	440	440	440	440
DAYS IN SEASON	133	133	147	147	185	185	185	185
DAILY KILL	3546	4137	3546	4198	3546	4198	3546	4198
ANNUAL KILL	471618	550221	521262	617106	656010	776630	656010	776630
BUTCHERS NUM	39	36	39	36	39	36	39	36
LABOURERS NUM	48	36	48	36	48	36	48	36
BUTCH DAILY PAY	181.25	212.5	181.25	212.5	181.25	212.5	181.25	212.5
LABR DAILY PAY	112.5	115	112.5	115	112.5	115	112.5	115
LABOUR COSTS (($/ccs)#	3.52	2.85	3.52	2.81	3.52	2.81	3.52	2.81
MACHINE COSTS ($/ccs)	0.04	0.76	0.04	0.27	0.03	-0.14	0.03	-0.71
TOTAL COST ($/ccs)	3.56	3.61	3.56	3.08	3.55	2.67	3.55	2.09
CCS/BUTCH/DAY	90	117	90	117	90	117	90	117
REL COST SAVE/CCS		-0.05		0.48		0.88		1.45
REL COST SAVE/YR		-29244		295878		680074		1129185
PROFIT/CC ##	5	4.95	5	5.48	5	5.88	5.00	6.45
TOT PROF/YR	2358090	2721861.042	2606310	3381407.8	3280050	4563224.01	3280050	5012334.92
TOT INCR PROF/YR		363771		775098		1283174		1732285
CAP INVESTMENT ###	59000	1200000	59000	836229	59000	472458	59000	-302640
BAL CARRIED FWD		836229		472458		-302640		-1585814
ANN. COST INVESTMENT *	20650	420000	20650	165360	20650	-105924	20650	-555035
PAYBACK TIME (YRS)		**3.30**		**1.08**		**0.37**		**-0.17**

2.37 YEARS

Plant 4	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
	MAN	AUTO	MAN	AUTO	MAN	AUTO	MAN	AUTO	MAN	AUTO
CCS/MIN	8	9.655	8	9.655	8	9.655	8	9.655	8	9.655
MIN/DAY	430	435	430	435	430	435	430	435	430	435
DAYS IN SEASON	145	145	145	145	145	145	145	145	145	145
DAILY KILL	3306	3550	3306	3780	3306	3900	3306	3900	3306	3900
ANNUAL KILL	479370	514750	479370	548100	479370	565500	479370	565500	479370	565500
BUTCHERS NUM	50	40	50	40	50	40	50	40	50	40
LABOURERS NUM	18	23	18	23	18	23	18	23	18	23
BUTCH DAILY PAY	160	175	160	175	160	175	160	175	160	175
LABR DAILY PAY	96	96	96	96	96	96	96	96	96	96
LABOUR COSTS (($/ccs)#	2.83	2.19	2.83	2.19	2.83	2.19	2.83	2.19	2.83	2.19
MACHINE COSTS ($/ccs)	0.04	0.82	0.04	0.63	0.04	0.38	0.04	0.01	0.04	-0.49
TOTAL COST ($/ccs)	2.87	3.01	2.87	2.82	2.87	2.57	2.87	2.20	2.87	1.70
CCS/BUTCH/DAY	69	105	69	105	69	105	69	105	69	105
REL COST SAVE/CCS		-0.14		0.05		0.30		0.67		1.17
REL COST SAVE/YR		-70709		26255		167528		376891		659530
PROFIT/CC ##	5	4.86	5	5.05	5	5.30	5	5.67	5	6.17
TOT PROF/YR	2396850	2503040.946	2396850	2766754.7	2396850	2995028.4	2396850	3204390.836	2396850	3487030.129
TOT INCR PROF/YR		106191		369905		598178		807541		1090180
CAP INVESTMENT ###	59000	1200000		1093809	59000	987618.108	59000	617713.3828	59000	19534.98547
BAL CARRIED FWD		1093809		987618.11		617713.383		19535		-788005.851
ANN. COST INVESTMENT *	20650	420000	20650	345666	20650	216200	20650	6837	20650	-275802
PAYBACK TIME (YRS)		**11.30**		**2.96**		**1.65**		**0.76**		**0.02**

3.76 YEARS

Plant 3	**YEAR 1**		**YEAR 2**		**YEAR 3**		YEAR 4		YEAR 5		YEAR 6	
	MAN	**AUTO**	**MAN**	**AUTO**	**MAN**	**AUTO**	**MAN**	**AUTO**	**MAN**	**AUTO**	**MAN**	**AUTO**
CCS/MIN	8.16	8.32	8.16	8.32	8.16	8.32	8.16	8.32	8.16	8.32	8.16	8.32
MIN/DAY	430	430	430	430	430	430	430	430	430	430	430	430
DAYS IN SEASON	130	130	145	145	150	150	150	150	150	150	160	160
DAILY KILL	3497	3297	3497	3350	3497	3450	3497	3578	3497	3578	3497	3578
ANNUAL KILL	454610	428610	507065	485750	524550	517500	524550	536640	524550	536640	559520	572416
BUTCHERS NUM	68	42.5	68	42.5	68	42.5	68	42.5	68	42.5	68	42.5
LABOURERS NUM	35	24	35	24	35	24	35	24	35	24	35	24
BUTCH DAILY PAY	135	137	135	137	135	137	135	137	135	137	135	137
LABR DAILY PAY	80.00	82.00	80.00	82.00	80.00	82.00	80.00	82.00	80.00	82.00	80.00	82.00
LABOUR COSTS (($/ccs)#	3.41	2.18	3.41	2.18	3.41	2.18	3.41	2.18	3.41	2.18	3.41	2.18
MACHINE COSTS ($/ccs)	0.05	0.98	0.04	0.87	0.04	0.75	0.04	0.57	0.04	0.28	0.04	-0.10
TOTAL COST ($/ccs)	3.46	3.16	3.45	3.04	3.45	2.93	3.45	2.74	3.45	2.46	3.45	2.08
CCS/BUTCH/DAY	52	84	52	84	52	84	52	84	52	84	52	84
REL COST SAVE/CCS		0.30		0.41		0.53		0.71		1.00		1.38
REL COST SAVE/YR		129529		200177		272794		380358		534640		787166
PROFIT/CC ##	5	5.30	5	5.41	5	5.53	5	5.71	5	6.00	5	6.38
TOT PROF/YR	2273050	2272579.063	2535325	2628927.2	2622750	2860293.5	2622750	3063557.567	2622750	3217840.216	2797600	3649245.8
TOT INCR PROF/YR		-471		93602		237544		440808		595090.2158		851645.81
CAP INVESTMENT ###	59000	1200000	59000	1200471	59000	1200942	59000	1107340	59000	869796.2137	59000	428988.65
BAL CARRIED FWD		1200471		1200942		1107340		869796		428988.6464		-166101.57
ANN. COST INVESTMENT *	20650	420000	20650	420330	20650	387569	20650	304429	20650	150146	20650	-58136
PAYBACK TIME (YRS)		**-2548.11**		**12.83**		**5.06**		**2.51**		**1.46**		**0.50**

5.5 YEARS

APPENDIX 1 (cont)

Explanation of derivation of each line.

Line 1 - CCS/MIN: Carcases per minute - Figures taken as given

Line 2 - Min/day: Minutes per day -Figures taken as given

Line 3 - Days in season - Actual figures normalised for Plant 3 by averaging the figures from the current season and those before and after.

Line 4 - Actual daily kill - averaged figure for season.

Line 5 - Annual kill/chain - Line 3 * Line 4.

Lines 6, 7, 8, 9 - Manning and Wage figures taken as given.

Line 10 - Labour cost per carcase: manning numbers * daily pay * kill per day.

Line 11 - Machine cost per carcase: annual cost of investment / kill per day.

Line 12 - Total cost : Addition of Lines 10 and 11.

Line 13 - Daily kill / number of butchers.

Line 14 - Relative cost savings per carcase: Total cost for manual system compared to total cost for automated system.

Line 15: Relative cost savings per year: Line 14 * annual kill.

Line 16: Profit per carcase: Assume common profit per carcase of $5 and add (subtract) rel cost saving.

Line 17: Total profit per year: Line 16 * annual kill.

Line 18: Total increased profit per year: Subtract profit from manual system from profit for automated system.

Line 19: - Capital investment: Capital investment made by each plant.

Line 20: - Balance carried forward: Difference between original investment and increased profit. This figure carried forward to form the new capital investment amount in the new period.

Line 21: - Annual cost of investment. This figure used to calculate machine costs.

Line 22: - Payback time in years - outstanding capital investment figure divided by increased profit for year.

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